

**PUBLIC VERSUS PRIVATE HEALTH CARE PROVISION
IN THE NORTHEAST OF THAILAND**

By

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A thesis submitted for the degree of Doctor of Philosophy of
The University of Canberra

September 2002

Abstract

This thesis is a comparative study of public and private health care provision in Northeast Thailand. Its main objective is to explore the question of whether private health providers are more efficient and effective than their public health counterparts. The thesis also examines equity concerns raised by the growth of private sector medical institutions. The study commences by describing the changes in health problems, health policies and health care delivery in developing countries and Thailand that have led to the development and growth of private health care. This is followed by detailed consideration of the Northeast of Thailand including the socioeconomic context, health indicators and health delivery systems development paying particular attention to private sector growth. The remainder of the thesis is comprised of an empirical study of selected public and private sector hospitals in Northeast Thailand and an analysis of the results. Much of the data was collected from questionnaires delivered to patients and staff in the study hospitals.

The major findings include roughly similar levels of patient satisfaction between public and private hospitals; patients utilizing public hospitals often had no choice of which institutions to use; and the average incomes of patients attending private hospitals were above those of public hospital patients. There was undoubted inequity of access to private sector facilities. Data gathered from hospital staff showed greater levels of satisfaction with staffing levels and quality in private hospitals than in public ones. Salaries were more compressed in public hospitals due to central government rules than in private hospitals whose management was based on market considerations. However, higher salaries were paid to skilled professionals in the private sector. Public sector hospital management was typically bureaucratic with central government guidelines and decisions determining many aspects of hospital organization. It was found that comparison between public and private hospitals was complicated by the different missions and activities of institutions in the two sectors. The thesis concludes by arguing that the mixture of public and private health care providers has contributed to a more competitive atmosphere which has encouraged greater concern with quality and efficiency in the delivery of health services in Thailand.

Dedication

This thesis is dedicated to my parents Thawee and Thongsuk Kongdee
for teaching me the value of knowledge

Acknowledgement

I am truly grateful and would like to thank those who have assisted me in the research and conduct of this thesis. In particular I would like to express my sincere gratitude to my supervisor Professor Mark Turner for his sincere and invaluable guidance and not only helping me academically but also assisting me overcome many obstacles. Special thanks go to Prof. Eugene Clark, Patricia, Remy and Lisa Clark for their great supports throughout my stay in Australia.

I am also grateful to my fellow postgraduate student, Ekapong Lauhathiansin and my colleagues, Associate Professor Bandit Thinkomrop and Assistant Professor Pattara Sanchaisuriya for their moral and intellectual support.

Acknowledgement is given to all academic and supporting staff of the Faculty of Management at the University of Canberra for putting up with me and my constant requests for help, especially to Mark Hugh and Simon Hoy for academic and moral support.

Appreciation is also extended to the Department of Employment, Education, Training and Youth Affairs (DEETYA) Australia, and the Presidential Scholarship, University of Canberra for providing me with financial support without which I would have not been able to pursue my studies at the University of Canberra. My gratitude also goes to the Faculty of Public Health for giving me permission to study at doctorate level.

Sincere gratitude to all hospital administrators, staff, patients and academics in public health in Thailand who provided valuable information without their assistance this thesis would not have been possible.

I would like to thank my grand father Tan Kaewkoed, my mother Thawee, my father Thongsuk Kongdee and my sister Marasri Ngoenjinda for all of the supports they gave me.

Finally a big thank you to my husband Suwit Laohasiriwong for encouraging me and helping me editing this thesis.

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List of Abbreviations

ADB	Asian Development Bank
AIDS	Acquired Immunodeficiency Syndrome
BCG	Bacille Calmette-Guerin (TB vaccine)
CEO	Chief Executive Officer
CQI	Continuous Quality Improvement
DPT	Diphtheria, Pertussis and Tetanus
DT	Diphtheria Tetanus
GC	Governing Committee
GDP	Gross Domestic Product
GNP	Gross National Product
GP	General Practitioner
HA	Hospital Accreditation
HBV	Hepatitis B Virus Vaccine
HDP	Health Development Plan
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
ICU	Incentive Care Unit
IMF	International Monetary Fund
ISO 9002	International Organisation for Standardisation 9002
IUD	Intra Uterine Device
MBA	Master of Business Administration
MoPH	Ministry of Public Health
NESDB	National Economic and Social Development Plan
NGO	Non Government Organization
NPM	New Public Management
OD	Organizational Development
OPD	Out-patient Department
OPS	Office of Permanent Secretary
OPV	Oral Polio Vaccine

PHC	Primary Health Care
POA	Public Organisation Act
QC	Quality Control
RN	Professional Nurse
SD	Standard Deviation
TAOs	Tambon Administration Organizations
TB	Tuberculosis
TN	Technical Nurse
TQM	Total Quality Management
TT	Tetanus Toxoid
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
US	United State of America
VHCs	Village Health Communicators
VHVs	Village Health Volunteers
WHO	World Health Organization

Chapter One

Introduction and Methodology

In most developing countries health services have been traditionally provided by the state. However in recent years there has been increased private sector participation in the health sector. Health sector often accompanied by the popular view that private health care is superior to that provided by the state. Thailand conforms to this pattern. However, the popular belief in the superiority of the private system in Thailand is a matter that has been assumed rather than demonstrated. This thesis will provide the necessary empirical data to make an informed judgement on the matter as it describes and analyses the development of private health services in Thailand and compares it to the perceived performance of public sector health institutions. The geographic focus of the research is Northeast Thailand which is the most populous and least privileged region in the country (Thongthai, 1996; Prapertchop, 1999). The performance of the private sector health providers will be compared with that of the government hospitals system. This study is also concerned with identifying whether there is an appropriate mix of public and private health care for Thailand to achieve a health system where resources are used efficiently, high quality service is offered at an affordable price, and there is equity of access (Nittayaramphong and Tangcharoensathien, 1994: 31). This chapter sets out the background to the development of private health care services in Thailand and the Northeast, the methodology chosen for the study, the research problems and the structure of the thesis.

Background to the Development of Private Health Care Services in Thailand

In 1882, the fifth year of the reign of King Rama III, Western medicine began to play an important role in the Thai medical and public health system. It was employed to provide

curative care to patients and also contributed to disease prevention strategies (MoPH, 1997: 159). Health care has been predominantly funded and operated by the government since the start of Western medicine in 1882. The government has directly provided health care, run most hospitals, and managed health services through the hierarchical administrative structure of the Ministry of Public Health (MoPH). Health care policy has been developed since 1961 in the form of the Health Development Plan (HDP) as an integral part of the National Economic and Social Development Plan (NESDP) (MoPH, 1996: 3). These efforts have helped to improve all people's health status. They have become better educated about health matters, enjoyed improved nutrition, been subject to effective immunisation and have been given access to health care when sick. These factors have contributed to them living longer. Life expectancy at birth in 1960 was 49 years (World Bank, 1978) while by 1998 it had risen to 69 years (UNICEF, 2000). Despite the considerable increase in the coverage of health services and improved ratios of health personnel to total population, the Thai people now face health problems that are different from those they encountered in the past. Some of the new challenges are the epidemiological transition from communicable diseases to behaviour related diseases, inaccessibility of services due to the rising cost of medical care or ineffective health service systems, and inadequate information for self-care and sound selection of services (MoPH, 1997: 151-158). At the same time expenditure for the government health system has grown rapidly, at a higher rate than the gross national product in recent times of budgetary constraint. With the changing population age structure, the existing health service systems cannot effectively respond to the needs of certain groups of citizens such as the elderly. Furthermore, public expectations of health services are rising as those who use services demand higher standards of care. Changes in the socio-economic environment, democratisation, rapid development of medical and information technologies, and alterations to the overall managerial system for national health development have also had a considerable impact on the structure and performance of current health systems (Chunharas ed., 1998).

Urbanisation in Thailand is linked to economic growth, most of which has occurred in urban areas. This is where most wealth and high incomes are located and where new market opportunities have been concentrated. Health has been one of those market

opportunities. The private health sector has been growing in terms of numbers of private hospital beds during the past 20 years. When private hospitals first started registering with the MoPH in 1962, there were four. All of them were located in Bangkok and owned by not-for-profit organisations. The number of private hospitals in Bangkok has since grown to 143 in 1997 and 348 in other parts of the country (Wibulpolprasert et al, 1998). Most of this growth has been amongst private for-profit facilities. Given such expansion it follows that there have been increasing numbers of health personnel working in the private sector. For example, physicians working in the private sector increased by 81 per cent, from 1,939 to 3,510, between 1990 and 1995. Nurses in the private sector also increased by 128 per cent, from 3,366 to 7,679, between 1990 and 1995 (Health Statistics Division 1994, 1996). Four principal reasons for the growth in private sector health provision can be identified: growth of personal or household income leading to increased purchasing power; unchanging standards of care in urban public hospitals while demands for higher quality service from more affluent sections of the public grew; the creation of instruments to encourage private sector growth by the central ministries such as exemption from import duty on medical equipment, and exemption of private hospitals from corporate income tax for the first 5 years (Board of Investment, 1996); and the lack of a strong MoPH policy to control private sector expansion (Bennett and Tangcharoensathein, 1994; Nitayarumpong and Tangcharoensathein, 1994: 31).

In addition to examining the development of health care and health issues across the whole country, this thesis also focuses on the Northeast of Thailand. The Northeast of Thailand covers an area of approximately one third of the country and there are 20 million people living in this region or about one third of the country's population. It is the region which has the lowest average income per person and the highest level of personal debt in the country (National Statistical Office, 1993). In health service issues, it conforms with the nation's patterns of change in demographics, health needs and expansion of the private sector. There were no private hospitals in the Northeast before 1957 (Chumraspan, 1993: 30), but by 1996 there were 53 private hospitals with 3,132 beds (MoPH, 1997: 119). The Northeast's health system problems are similar to those found elsewhere in the country, but may be more severe since it has the lowest level of

health care coverage and lowest rate of health personnel per 1,000 population among Thailand's regions (MoPH, 1997: 92-121).

Data gathered from interviews with health personnel and a report of Khon Kaen Provincial Health Centre (1996) revealed a number of problems with public health services in the Northeast. These include overlapping health services competing with each other within the public sector and with the private sector. There has been no assurance of equal access to health service, and many of the poor have not been able to get health services. Many health centres and public hospitals have been unhappy with their budget allocations. Many clients have not been satisfied with the quality of public health services, and there have been delays in service provision due to rigid centralised budget allocation which does not allow for switching of funds in response to changing needs. There has been the accusation by medical health personnel in the public sector that private hospitals are operating exclusively for their own commercial interest and not for general social benefit. These critics allege that private hospitals have emphasised the usage of expensive complex technologies to attract clients. In addition the government has been lax in controlling both quality and price in the private sector. There are no routine standard information systems which would allow the MoPH to review private sector activities and investigate cases in which unnecessary health care appears to be occurring (Khon Kaen Provincial Health Centre, 1996). What are the patients' perspective concerning these matters? What actions should the government take to ensure that quality health care is accessible to all people in this present public and private mix? These are some of the leading questions which are addressed in this thesis.

The Research Problem

The continuing development of health services delivery system in Thailand has been criticised as being out of fit with the socio-economic changes affecting disease patterns and client demands. Per capita expenditure on health has produced a lower health status for people in Thailand than some countries with lower per capita expenditure on health such as Sri Lanka (Supachutikul, 1996; Wibulpolprasert, 1994). The health system in Thailand is now undergoing management reform. The reform focuses on partnerships and networks between public, private and NGO sectors; and on increased monitoring of

cost and quality of health providers. However, the legacy of the 'bureaucratic polity' (Riggs, 1966; Bowornwathana, 1994) has meant that a cautious approach has characterised official promotion of the private sector in health delivery. The rapid private sector growth in health would appear to be more a function of consumer demand and official laxity than policy design. It has been the 'patient-led' experience where 'money follows patients' (Saltman and Otter, 1992). It does, however, conform to the World Bank (1993) prescription of promoting diversity and competition in health systems. Under this banner the World Bank has advocated greater reliance on the private sector to deliver clinical services and has also argued for the removal of unnecessary legal and administrative barriers affecting the private sector. While there is a growing consensus in industrialised countries that the role of government is to control and regulate public and private markets in health care, there have been few attempts to define more analytically either the prerequisites, advantages or potential pitfalls of so doing (Broomberg, 1994). The notion of managed competition (Carrels, 1995) may have some appeal and utility in Thailand. It is believed that private health care in Thailand has grown in response to customer demand for choice, quality and responsiveness in health care delivery. This thesis is especially concerned with whether private health providers actually do give better quality services than the public sector, whether private sector health deliverers are more efficient and effective in providing health care. Also, there is the question of whether the management strategies used in the private health sector have contributed to better quality of services. A further aspect for empirical enquiry is to examine whether the growth of the private health sector is creating more inequity in the accessibility of poor rural people to health services. The thesis uses detailed analysis of hospital staff and patient perceptions to explore these issues in the Northeast of Thailand.

The Purpose and Importance of the Study

This study traces the development of health system management in Thailand and places it in the context of international health system management. It also examines claims that private health provides: an efficient and effective addition to Thailand's health system; a necessary addition; does not adversely affect access to health services but encourages efficiency through competition; and does not create a two-tier system of public and

private health care. The thesis examines the challenging notion that the public health bureaucracy has an interest in maintaining near monopoly control over health administration and delivery. To explore these questions the study contains a detailed empirical study in the Northeast of Thailand, and involves in-depth interviews with a range of stakeholders. It also investigates how far imported ideas, such as those from New Public Management, have influenced the recent development of health care management in Thailand as opposed to the traditional model of bureaucratic provision by the centralised state. In pursuing these questions the study adds to the understanding of the dynamics of public health development in Thailand and contributes to debates and decisions on the future of public health both in Thailand and in other parts of the developing world.

Methodology

The field work for this dissertation was carried out in Thailand between June 1997 and October 1998. Other information for the study was obtained from published and unpublished documents in Australia and Thailand. In Australia this secondary data was mainly obtained through libraries of the University of Canberra, the Australian National University, and the National Library of Australia. In Thailand, such information was obtained from Khon Kaen University, Mahidol University, the Ministry of Public Health, the Health System Research Institute, Khon Kaen provincial health office, and eight public and private hospitals in the Northeast of Thailand.

The public sector hospitals were randomly selected from three clusters comprised of small, medium and large hospitals. Four public hospitals were then selected to include a regional hospital, a general hospital and two community hospitals. Selection of the private sector case studies began by dividing these hospitals into not-for-profit and for-profit. Since there was only one private not-for-profit hospital in the Northeast, that hospital was automatically chosen. The private for-profit hospitals were randomly selected from two clusters, one containing small hospitals and the other comprising large ones.

In-depth interviews with specific people such as public health administrators, academics and health personnel were conducted to develop a full understanding of the operation of health services and private health sector development in Thailand. The focus of the interviews, however, was on the performance of public and private hospitals in the Northeast of Thailand. The case study approach was applied to three public and three private hospitals in all of the public health administration zones of Northeast Thailand (zones five, six and seven). A variety of techniques was utilised. Official document research and interview of key administrators were employed to find out the hospital structure, vision, objectives, strategies, policies, management styles, services and problems. Structured interviews and in-depth interviews of the clients were chosen as a technique for data collection to enable the researcher to acquire views on patient satisfaction and social accountability of public and private hospitals. The questionnaire survey and in-depth interview were adopted for the health personnel to investigate social accountability, risk management, technical quality, hospital management practice and human resource development. Participant observation was employed to validate the information and gain further insight. A total number of 223 patients in four public and four private hospitals in Khon Kaen, Udonthani, Nakhonratchasima, Roiet and Mahasarakam were respondents for the structured interviews. A questionnaire survey was administered to 267 health personnel in the eight hospitals. Additional data from one public and one private hospital were also collected to assist in answering some comparative questions.

The Structure of the Thesis

The thesis is organised into eight chapters. Chapter two provides a detailed description of changes in health problems, health policy and health care delivery in the developing world that have led to the growth of private health care. The chapter provides an understanding of public health challenges facing developing countries, and investigates the proposition that health services in many developing countries have come under critical scrutiny in recent years because of increasing expenditure in times of budgetary constraint. According to this view, the government's role as major health provider is under pressure due to budgetary limitations, soaring health costs and major

organisational difficulties. Although the private sector has been involved in health services for many years the extent of its involvement has increased dramatically in the past decade to fulfil customer demand. The chapter critically examines the literature relating to whether the private sector contributes to an enhanced quality of health care for the population.

Chapter three look at public health development in Thailand and provides the necessary context for the presentation and analysis of the empirical data in subsequent chapters. The chapter examines the health status and health problems of Thai people. Data on health service systems and the administrative system of the MoPH are critically examined. This information is used to investigate the extent to which changing conditions in Thailand have contributed to the emergence of new challenges in health. The changing context of health provision in Thailand has led to rapid expansion of private health care. While this may take pressure off the government budget, it does raise a question about the equity and efficiency of the new mixed system. The chapter also looks into the vision for Thai people's health contained in the Health Development Plan under the Eighth National Economic and Social Development Plan (1997-2001). The chapter provides a detailed account of private health sector development in Thailand and explains why the private health sector has grown dramatically in the past decade.

Chapter four describes the situation in the Northeast of Thailand, the location of the case study. It establishes the determinants of the region's health profile. The health status, health problems and health service systems are presented in historical perspective. This chapter shows how changes in the socio-economics, environment, rapid development of medical technologies as well as changes in politics and the overall managerial system for national health development have impacted on health care in this region. The chapter also provides a detailed account of private sector involvement in health care provision in the Northeast of Thailand. A leading question is whether the rapid private sector growth in health would be classified as the 'patient-led' experience where 'money follows patients'. The chapter also investigates some basic aspects of efficiency, quality and equity in health delivery of the public and private health mix in the Northeast.

Chapter five provides a detailed account of health care provision in three public hospitals in the Northeast of Thailand. Data drawn from questionnaire surveys, structured interviews and participant observation are used to evaluate the quality of health care in public hospitals from the perspectives of patients and health personnel. The chapter also identifies various quality improvement schemes applied in the case-study hospitals to upgrade and ensure the quality of care. Included in the chapter is critical investigation of the management systems utilised in these public hospitals.

Chapter six examines health care provision in three private hospitals in the Northeast of Thailand. The chapter asks why people seek services from a private hospital. It investigates measures applied to improve and ensure the standard and quality of the services provided in these private hospitals. This chapter also pursues a similar line of enquiry as undertaken for public hospitals and seeks the opinions of patients and health personnel on the efficiency and effectiveness of service delivery. The chapter finishes with an evaluation of the management systems applied in these public hospitals.

Chapter seven compares the health care provision of public and private hospitals. It evaluates whether patients are more satisfied with the services provided from private hospitals than those of public hospitals. It also determines whether the private sector health deliverers are more efficient and effective in providing health products. Data drawn from a range of methodologies are used to compare the management utilised by public and private health care providers.

Chapter eight presents a summary of the major argument raised in this thesis, it also provides concluding notes, identifying the causes of problems common to both public and private hospitals in the Northeast of Thailand. The chapter ends with a list of items to be addressed to improve the health services in terms of patient satisfaction, efficiency and equity.

Chapter Two

Health in Transition in Developing Countries

This chapter focuses on health issues in developing countries and provides an account of changes in health problems, health policy and health care delivery in the developing world that have led to the development and growth of private health care. The chapter also contains examples of private sector involvement in health care in some developing countries to demonstrate the nature of that involvement. As a preliminary step, it is necessary to establish the meaning of health and developing countries as used in this thesis. Definitions of health in dictionaries and some books mention soundness and vigour of the body and/or mind and freedom from disease (Basch, 1990; Santerre and Neun, 1996). But in the Preamble to the Constitution of the World Health Organisation in 1946, we find a shift to a more holistic definition of health: 'a state of physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 1998: 39). People can be in good health even in the presence of a disabling disease (Beaglehole et al., 1993). Furthermore, health is not only about physical and mental status, but also about social and economic relationships which give rise to that status (Green, 1994:7).

The chapter will elaborate on the current health status of the people in developing countries. The continuing improvement of health status is seen in most of the developing world but in differing degrees according to region and country. However, there are some countries which have experienced reversals in health status such as some African countries. The chapter also reviews the changes in disease patterns in the developing world from communicable to non-communicable diseases. These transitions have affected health policies and the measures chosen to manage the problems. Governments have played important roles as major health care providers in the developing world but they have often become known as inefficient health providers, a matter which the chapter

explores. Governments have increasingly faced the problem of providing quality health care to their people under considerable budgetary constraints. This has led to changes in services provision with many developing country governments applying strategies which are broadly in line with the New Public Management (NPM). These strategies have included privatisation, market orientation and consumer choice. With these measures, the private sector has increased its role in providing health care in the developing world. Such innovations invariably lead to questions about the degree of the public and private mix which will ensure equity, efficiency, effectiveness and patient satisfaction with health care. This debate is examined in the chapter.

It should be noted that in this study the term 'developing countries' is utilised to identify those countries which are covered by the World Bank's categories of 'low income' and 'lower middle income'. Some countries from the 'upper middle income' are also included. The basis for these classifications is GNP per capita. It is appreciated that there are alternative ways of classifying the developmental levels of countries, such as the UNDP's composite 'human development index' (UNDP, 1998; Hulme and Turner, 1990). Also, it is noted that there are longstanding debates on the meaning of development (Turner and Hulme, 1997; Light, 1983; Cadman and Payne, 1990; Lewellen, 1995; Gugler, 1996). However, for the purposes of this thesis it is convenient and acceptable to adopt the World Bank categories which identify just over 100 developing countries (World Bank, 1997)

Health Status in Developing Countries

Health status can be measured by various indicators. Some indicators which show good health are: proper nutrition; adequate housing; and a social structure which allows the individual to lead a productive life and satisfy his or her physical, mental and emotional needs. While these components of positive health are sometimes difficult to measure, there are a number of health indicators which are conventionally used to provide an informed snapshot of a nation's health status (WHO, 1993). These include life expectancy at birth, and mortality among children under the age of five and among

infants under one year of age. Major causes of death and disease are also major human health indicators (World Resources Institute, 1992; WHO, 1998).

Life Expectancy

Increasing life expectancy is an important indicator of social progress in both developed and developing nations. Over the past forty years life expectancy has improved more than during the entire previous span of human history (World Bank, 1993). According to the estimation compiled by the United Nations (2000), life expectancy at birth for both sexes continued to improve globally, reaching a world average of 64.1 years by 1990-1995 (62.1 years for men and 66.3 years for women) (see Table 2.1). Between 1950-1955 and 1990-1995, life expectancy at birth increased by about 17.6 years globally for both sexes, (16.9 years for men and 18.4 years for women). But stark contrasts remain. In 1990-1995, in 45 developing countries with a total population of nearly 850 million people (15 percent of the global population), life expectancy at birth had not even reached 62 years (United Nations, 2000). In developed regions, life expectancy is estimated to be 70.3 years for males and 77.8 for females; in less-developed regions, these values sink to 60.4 and 63.5 years; and in the least developed regions, these values plummet to 48.2 and 50.1 years. Between the least-developed (49.1 years) and the most developed (74.1 years) nations, the gap in life expectancy is 25 years. On current trends that gap could widen to 37 years, by the year 2000 (WHO, 1995: 1-2).

The nearly universal reduction of mortality since 1950 has represented a very real improvement in lives of people the world over. Nevertheless, there is increasing cause for concern about instances of reversals of the gains made. Countries affected by conflict or by the expanding HIV epidemic are particularly vulnerable (United Nations, Population Division, 1995: 55-57). In Rwanda life expectancy is estimated to have dropped to 23.5 years as a result of widespread massacres. Conflict was also at the root of rising mortality affecting Liberia, Sierra Leone and Somalia, which all had life expectancy in 1990-1995 below 40 years. Uganda also had an estimated expectation of life under 40 years in 1990-1995, largely because of the impact of the HIV epidemic (United Nations, 2000; WHO 1998). For sub-Saharan Africa, in 1990-1995, the estimated number of death from HIV/AIDS was 1.83 million (WHO, 1999).

In the early 1990s, significant reductions in life expectancy in several countries contributed to slowing the reduction of differentials at the regional level. As Table 2.1 indicates, in 1990-1995 the expectation of life for Africa as a whole was just 51.1 years, whereas both Asia and Latin America and the Caribbean had expectations of life well over 60 years (64.5 years for Asia and 68.1 years for Latin America and the Caribbean). Furthermore, although the less developed regions as a whole had achieved a life expectancy of 61.9 years, the least developed countries in Africa, exhibited considerably lower figures. These included Eastern Africa with 45.4 years life expectancy; Western Africa with 45.5 years; and Middle Africa with 50.6 years. Life expectancy was much higher in Southern Africa (58.9 years) and in Northern Africa (62.2 Years), although in the case of Southern Africa, declines associated with the HIV/AIDS epidemic would soon set in (United Nations, 2000).

Table 2.1 Life Expectancy in 1950-1955 and 1990-1995 for The World, Major Areas and Regions

Major Area or Regions	Both sexes		Male		Female	
	1950-1955	1990-1995	1950-1955	1990-1995	1950-1955	1990-1995
World	46.5	64.1	45.2	62.1	47.9	66.3
Developed regions	66.6	74.1	64.0	70.3	69.0	77.8
Less developed regions	40.9	61.9	40.1	60.4	41.8	63.5
Least developed countries	35.6	49.1	35.0	48.2	36.3	50.1
Less developed regions without the least developed countries	41.7	64.3	40.9	62.7	42.6	66.0
Europe	66.2	72.6	63.4	68.5	68.6	76.7
Eastern Europe	65.6	68.2	61.8	63.1	68.5	73.5
Northern Europe	69.2	75.6	66.8	72.6	71.5	78.5
Southern Europe	63.3	75.8	61.4	72.6	65.1	79.0
Western Europe	67.6	76.5	65.1	73.1	69.9	79.9

Major Area or Region	Both sexes		Male		Female	
	1950-	1990-	1950-	1990-	1950-	1990-
	1955	1995	1955	1995	1955	1995
North America	69.0	75.9	66.2	72.7	72.0	79.0
Oceania	60.9	72.9	59.1	70.3	62.9	75.5
Australia/ New Zealand	69.6	77.4	67.0	74.4	72.3	80.3
Melanesia	38.0	59.0	38.2	58.0	37.7	60.2
Micronesia	49.7	67.3	47.9	65.7	51.9	69.1
Polynesia	45.9	69.8	45.0	67.7	47.0	72.2
Africa	37.8	51.1	36.4	49.6	39.2	52.6
Eastern Africa	36.3	45.5	34.9	44.3	37.9	46.7
Middle Africa	36.0	50.6	34.4	48.9	37.6	52.3
Northern Africa	41.8	62.2	40.7	60.8	43.0	63.7
Southern Africa	44.2	58.9	43.0	55.0	45.3	63.0
Western Africa	35.7	49.0	34.3	47.5	37.1	50.5
Asia	41.3	64.5	40.6	63.2	42.0	65.9
Eastern Asia	42.9	69.6	41.4	67.6	44.7	71.8
South-central Asia	39.3	60.2	39.9	59.8	38.6	60.6
South-eastern Asia	40.5	63.7	39.5	61.8	41.7	65.5
Western Asia	45.2	66.2	43.7	64.3	46.8	68.2
Latin America and the Caribbean	51.4	68.1	49.7	64.8	53.1	71.5
Caribbean	52.1	67.9	50.7	65.7	53.5	70.2
Central America	49.2	70.0	47.7	67.2	50.8	72.9
South America	52.0	67.4	50.3	63.9	53.9	71.1

Source: Modified from United Nations, 2000, *World Population Prospects: The 1998 Revision Volume 3: Analytical Report*, p. 51.

Mortality of Infants and Children Under Five Years

Another important indicator of health status are the mortality rates for infants and children under five years. The main reason for the universal increase in life expectancy at

birth is the lowering of infant and child death rates (Beaglehole and Bonita, 1997: 18). Infant mortality rates are falling in most countries from 155 per 1,000 live births in 1950-1955 to 62 per 1,000 live births in 1990-1995 and are expected to drop to 57 per 1,000 live births in 1995-2000 (United Nations, 2000) (see Table 2.2). However, the degree of variation between countries has increased over the last 30 years (WHO, 1993). In 1950-1955, infant mortality was about 3.3 times higher in the poorest countries compared with wealthy countries. In 1990-1995, this ratio had increased to an eleven-fold difference (WHO, 1998). In 1990-1995, the infant mortality rate for Africa as a whole was as high as 94 per 1,000 live births whereas it was 57 in Asia, and 40 in Latin America and the Caribbean.

Table 2.2 Infant Mortality Rate by Major Areas and Regions, 1950- 2000

Major Areas or Regions	1950-1955	1990-1995	1995-2000
World	155	62	57
Developed region	58	10	9
Less developed region	178	68	63
Least developed region	194	108	99
Europe	72	12	12
North America	29	7	7
Oceania	69	26	24
Africa	179	94	87
Asia	180	63	57
Latin America and the Caribbean	126	40	36

Source: Modified from United Nations, 2000, World Population Prospects: The 1998 Revision Volume 3: Analytical Report, p. 72.

Progress has been made in all regions in reducing death rates of children under five years (United Nations Population Fund, 1995: 16). Death rates of children aged under five years also declined, from 217 per 1,000 live births in 1950-1955 to 87 per 1,000 live

births in 1990-1995 (United Nation, 2000) (see Table 2.3). However, there has been a worsening of the gap between rich and poor countries. For example, in 1990-1995, there was about a three-fold variation in child mortality rates between wealthy developed countries and least developed countries, the region with the highest child mortality rates. By 1990-1995, there was a fourteen-fold variation. Of those who died annually in developing countries around 1985, almost 37 percent (13.5 million) were children under the age of five compared to about 3 percent in industrialised countries (United Nations Population Fund, 1995: 16). For 1990, the WHO estimates that about 12.9 million children were dieing annually in developing countries, but between 1980 and 1993, infant mortality declined by 25 percent. However, such successes are somewhat offset by the fact that each year 3 million babies born in developing countries do not survive for more than one week (WHO, 1995: 4-5).

Table 2.3 Under-Five Mortality Rate by Major Areas and Regions, 1950-2000

Major Areas or Regions	1950-1955	1990-1995	1995-2000
World	217	87	80
Developed region	93	12	11
Less developed region	246	96	87
Least developed region	307	17	156
Europe	107	15	14
North America	45	9	8
Oceania	69	26	24
Africa	179	94	87
Asia	180	63	57
Latin America and the Caribbean	126	40	36

Source: Modified from United Nations, 2000, World Population Prospects: The 1998 Revision Volume 3: Analytical Report, p. 73.

In 1995, about 11.2 million children in developing countries died before their fifth birthday. The most common causes of death among children in developing countries are

infectious diseases (54 percent) and neonatal and perinatal complications (32 percent) (see Table 2.4). The leading infections among those children are diarrhoea (19 percent), respiratory tract infections (13 percent), and measles (10 percent) (WHO, 1997).

Table 2.4 Main Causes of Death among Children Under Five in Developing Countries, 1995

Main Causes of Death	Number (million)	Percent
Diarrhoea, excluding neonatal diarrhoea	2.1	19
Acute lower respiratory tract infection, excluding neonatal pneumonia	1.5	13
Prematurity	1.1	10
Measles	1.1	10
Other neo- and peri-natal causes	1.1	10
Birth asphyxia	0.9	8
Congenital abnormalities	0.5	4
Neonatal tetanus	0.5	4
Birth trauma	0.4	4
Neonatal sepsis and meningitis	0.4	4
Pertussis	0.4	3
Tuberculosis	0.1	1
Total	11.2	100

Source: World Health Organization, 1997, *The World Health Report 1997 Conquering Suffering Enriching Humanity*, p. 21.

Trends of Major Causes of Death and Disease

Worldwide, about 50 million people died in 1997 (WHO, 1998: 44). Globally, the biggest killers were infectious and parasitic diseases, which accounted for nearly one third of the total (see Table 2.5). These diseases are mostly preventable by vaccinations and proper sanitation. The diseases of the circulatory system accounted for another one

fifth of deaths. These circulatory system diseases are associated with factors such as smoking, life style, and alcohol (WHO, 1997: 21). Infectious diseases are still major killers in the developing countries, accounting for a staggering 17.3 million deaths, or 33 percent of all deaths, in those nations in 1997. In many cases, the most deadly diseases are also the most familiar. As long as access to health care remains limited and sanitation is poor, the infectious diseases are likely to remain the major killers. For example, diarrhoea is a highly manageable and curable disease (WHO, 1995: 10), whether caused by virus, bacteria, or parasite, yet it claimed the life of 2.1 million children in the developing world in 1995 (WHO, 1997: 21). An ancient disease, tuberculosis (TB), currently kills 52,000 people each week (WHO, 1995: 21). The number of TB related deaths appears to be growing, especially in Africa. The human immunodeficiency virus (HIV) and TB are a particularly lethal combination. Malaria accounts for 2 million deaths annually, half in children under 10, with another 400 million clinical bouts of malaria. Most of these are in Africa. The remaining cases are concentrated in India, Brazil, Sri Lanka, Afghanistan, Vietnam, and Colombia (World Resources Institute et al., 1996: 180). Cholera has become endemic in Africa, Latin America and Asia. Dengue and yellow fever are also spreading.

Table 2.5 Causes of Death in Developed and Developing Countries, 1997

Causes of death	Number (Million)	Percent
Infectious and parasitic diseases	17.310	33
Disease of the circulatory system	15.300	29
Cancer	6.235	12
Perinatal and neonatal causes	3.630	7
Disease of the respiratory system	2.890	6
Maternal causes	0.585	1
Other and unknown causes	6.250	12

Source: World Health Organization, 1998, *The World Health Report 1998 Conquering Suffering Enriching Humanity*, p. 44.

Infectious and parasitic diseases were still major killers in developing countries (43 percent) in 1997 whereas the major cause of death in the developed world was circulatory diseases (46 percent) (see Table 2.6). However, there is an increasing trend of deaths due to circulatory diseases, from 16 percent to 24 percent in developing countries during the period of 1985 to 1997. Cancer deaths increased from 6 percent to 9 percent of total death in the developing during this period. Perinatal and maternal causes of death still formed a constant proportion of 21 percent between 1985 to 1997 in developing countries.

Table 2.6 Distribution of Deaths by Main Causes in Developed and Developing Countries, 1985 and 1997

Causes of death	Developing countries		Developed countries	
	1985 Percent	1997 Percent	1985 Percent	1997 Percent
Infectious and parasitic diseases	45	43	5	1
Disease of the circulatory system	16	24	51	46
Cancer	6	9	21	21
Disease of the respiratory system	6	5	4	8
Perinatal and maternal causes	10	10	1	1
Other and unknown causes	17	9	18	23
Total Number of Deaths (million)	37	40	11	12

Source: World Health Organization, 1998, The World Health Report 1998 Conquering Suffering Enriching Humanity, p 44.

Although these old foes still continue to kill millions of people each year, new or previously unknown infectious diseases are also appearing such as HIV/AIDS which accounted for an estimated 2.3 million deaths in 1997 (WHO, 1998). The illness caused by Ebola virus in the city of Kikwit, Zaire, in 1995 killed 250 people (WHO, 1995: 241). The factors that lead to the emergence of new threats from infectious disease are:

environmental change and disturbances to the balance of natural habitats; human demographics and behaviour; international travel and commerce; complications of modern medicine; microbacterial adaptation and change; and the breakdown of public health measures (Lederberg et al., 1992: 47).

The statistics on leading causes of disease and death clearly testify that there is a changing pattern of diseases in the developing world (Basch, 1999). Figure 2.6 shows that diseases of the circulatory system and cancer were the second and third leading causes of death in developing countries in 1997. These two deadly diseases, which used to be heavily concentrated in rich countries now account for 35 percent of death in the developing countries. This shift in the patterns of diseases and causes of death has been described as the 'epidemiological transition' or 'health transition' (WHO, 1997: 2; Feachem et al., 1991; Frank et al., 1989). Omran (1971) coined the term 'epidemiological transition' for the long-term changes in patterns of morbidity, disability and causes of death that have been observed in populations as they experience transformation in their demographic, economic and social structure. However, more recently, Frank et al. (1989) suggested that there are two phenomena to be considered in the context of epidemiological transition. First is health conditions or health status and disease incidence that define the epidemiological profile of a population. Second is the changing organised social response to those conditions, that is health care transition, concerned with the way the health care system is organised to deliver its services (Caldwell et al., 1990). This transition is related to several factors (Tabibzadeh et al., 1989; Foster, 1992). One is exposure to the risk factors for diseases which change as countries develop. Access to effective health services is clearly a second major factor. Despite evidence of transition, communicable diseases are still major killers in the developing world. The infectious and parasitic diseases alone accounted for 43 percent of deaths in these countries. It could be said that the population in developing countries is now suffering 'the worst of both worlds', high or increasing levels of both communicable and non communicable diseases. Developing country health systems must now cope with both of these phenomena.

The Role of the Public Sector in Health Care Provision

The statistics on life expectancy, morbidity and mortality of the people in developing countries reveal a complex and differentiated picture in the context of an overall improvement in health status. This health improvement has been partly the result of public health measures. In most developing countries health services have been traditionally provided by the state. Governments have attempted to impose public health regulations and to expand health services using advances in technology to improve their people's health status. Public health measures have brought about the eradication of smallpox and made immunisation available for many diseases such as polio, tetanus and diphtheria. These measures have been central to the reduction in the number of deaths caused by vaccine-preventable childhood diseases (World Bank, 1993)

In financial terms, world spending on health totalled about \$1,700 billion in 1990, or 8 percent of global income (World Bank, 1993). Of this, governments spent more than \$1,000 billion, or nearly 60 percent. Of the \$170 billion spent on health in the developing countries of Africa, Asia, and Latin America, governments accounted for half the total amount - 2 percent of the GNP of those regions. In the established market economies, where total health spending was almost \$1,500 billion, governments spent just over \$900 billion - more than 5 percent of GNP (World Bank, 1993). The sheer size of these expenditures demonstrates their importance for understanding the impact of government policies and activities on people's health. In addition, governments profoundly influence health in less direct ways; through their policies toward education, water supply, sanitation, and other sectors important for health; and through regulation of health systems, health providers, and insurers. Governments further affect health by their impact on household income by financing public health services and by providing care directly. What governments do varies enormously from country to country, but every government plays an important role in determining the provision of health services and the health status of its population (World Bank, 1993: 52).

Public Health Systems' Problems in Developing Countries

Despite tremendous progress recorded in aggregate figures on health status, many people in developing countries have failed to benefit (Gaag, 1995: 5). Absolute levels of mortality in developing countries remain very high: child mortality rates are about ten times higher than those in the established market economies. If death rates among children in poor countries were reduced to those prevailing in the rich countries, 11 million fewer children would die each year. Almost half of these preventable deaths are the result of diarrhoeal and respiratory illness, exacerbated by malnutrition. In addition, every year 7 million adults die of conditions that could be inexpensively prevented or cured: tuberculosis alone causes 2 million of these deaths. About 400,000 women die from the direct complications of pregnancy and childbirth (World Bank, 1993). Maternal mortality ratios in developing countries are 30 times higher than those in developed countries. In developing countries, where governments account for the greatest part of the modern medical care, responsible institutions and services are often inefficient. They frequently suffer from highly centralised decision-making rendering them unresponsive to differential and changing conditions (Green, 1994: 65). Budgetary allocations for health services can fluctuate widely from year to year and may be inadequate. Managers and health care workers are sometimes poorly motivated to provide the services for which they are responsible (World Bank, 1993: 4).

Health service in many developed countries have also come under critical scrutiny in recent years (Ham, 1992). In part this is because of increasing expenditure, much of it funded from public sources, and the pressure this has put on governments seeking to control public spending. Such budgetary pressure is also found in developing countries (Gaag, 1995). Of importance in all countries has been the perception that resources allocated to health services are rarely deployed in an optimal fashion. Thus, at a time when the scope for increasing expenditure is extremely limited, there is a need to search for ways of using existing budgets more efficiently and effectively. One of the ways is to encourage private sector involvement. While this may relieve government expenditure it has raised concerns about ensuring access to healthcare by all the people on an equitable basis (Sax, 1990). In some countries the growth of private sector healthcare has been

linked to a wish to enhance patient choice and to make service providers more responsive to patients as consumers (Ham, 1993).

The problems facing developing country health systems could be addressed, in part, by improvement to management. Four major organisational difficulties can be identified: resource misallocation, inequity, inefficiency and exploding cost.

- Resource misallocation: Scarce resources are allocated inefficiently. Public funds are being spent on inappropriate and cost-ineffective services. Too much is devoted to salaries compared with operating costs and on tertiary rather than primary levels of care (Cassels, 1995: 330). In some countries a single teaching hospital can absorb 20 percent or more of the budget of the ministry of public health, even though almost all cost-effective interventions are best delivered at lower-level facilities. Governments in developing countries spend an estimated US\$21 per capita on health, giving a total of about US\$84 billion. It is estimated that only a little more than US\$1 per person, or a total of US\$5 billion is devoted to cost-effective public health measures (World Bank, 1993).

- Inequity: People cannot gain access to the health care they need. This results from a variety of factors - an individual's poverty, geographical location, age, sex, lack of employment, unavailability of services for that particular problems (such as cancer) and bad planning and management of services (Cassels, 1995: 330). Poor people are especially vulnerable often lacking access to basic health services and receiving low-quality care (World Bank, 1993). Government spending for health goes disproportionately to the affluent in the form of free or below-cost care in sophisticated public tertiary care hospitals and subsidies to private and public insurance. For example, in Vietnam wealthier groups benefit disproportionately from hospital care: the richest 20 percent of the population are estimated to enjoy some 30 percent of benefits of hospital spending, while the poorest 20 percent get only 11 percent (World Bank, 1997: 53)

- Inefficiency: Existing services are badly managed. Money does not get to where it is needed, and it is hard to monitor how it is spent. Systems for purchasing goods and

services fail to ensure value for money (Nabarro and Cassels, 1994). Much of the money spent on health is for purchasing expensive brand-name pharmaceuticals instead of generic drugs. Health workers are poorly deployed and supervised, and hospital beds are underutilised (World Bank, 1993).

- **Exploding cost:** In some middle-income developing countries health care expenditures are growing much faster than income. Increasing numbers of general physicians and specialists, the availability of new medical technologies, and the expansion of health insurance linked to fee-for-service payments together generate a rapidly rising demand for costly tests, procedures and treatments (World Bank, 1993).

These health system problems are in line with other public sector service delivery problems. Since the early 1980s there have been attacks on size and capability of the public sector (Ranson and Stewart, 1994). There are three parts to this attack on the public sector. First, the public sector is criticised for being too large, consuming too many scarce resources. Strains on these resources lead to cuts in government spending and reduces the availability of public sector services. Secondly, there have been arguments about the scope of government. It has been pointed out that government has involved itself in too many activities and that alternative means of service provision could be found. In response to these views, many former governmental activities are being returned to the private sector. Privatisation has become a global phenomenon with any government service which can conceivably be provided by the private sector becoming a potential candidate to be turned over to private providers either by contracting out, direct sale or withdrawal of government. Thirdly, there have been sustained attacks on the structures and processes of government, with bureaucratic forms of organisation being subject to much criticism. Provision by bureaucratic means has become increasingly regarded as guaranteeing mediocrity and inefficiency as compared to the allegedly efficient non-bureaucratic features of private sector management (Hughes, 1998: 9). The public administration precepts of life-time employment, promotion by seniority, the terms and conditions of public employment, traditional accountability and even the theory of bureaucracy have been challenged as based on poor outdated reasoning and for providing inadequate incentives for good performance. New Public Management (NPM) is a response to the critiques of traditional public administration. Among the suggested

management changes and practices of NPM are cut-backs on 'wasteful' government by splitting up collusive systems and provider cartels; introducing external regulation; downsizing; contracting-out; and providing incentives for performance (Ferlie et al, 1996: 10).

Health care consumes a significant share of government resources in all countries, and the debate over access, cost and quality inspires strong emotions everywhere. The primary objective of health policy is to improve citizens' health, within a budget constraint. Several subsidiary objectives follow from this twofold obligation (World Bank, 1996): equitable access to health care; producing the quantity, quality and mix of health interventions (including preventive care and health education) that bring about the greatest improvement in health; running medical institutions as efficiently as possible; and financing health interventions in the ways that are efficient and equitable (World Bank, 1993). Both the problems in public health care provision and the primary policy objective to improve citizen's health status have led governments into considering and adopting new or modified models of health care, all of which involve a greater role for the private sector.

The Private Sector's Role as Health Care Providers

While public sector healthcare provision has suffered from various problems such as inefficiency, inequity and budget constraints, private providers have become more numerous and gained more acceptance. They are frequently perceived to be more technically efficient than the public sector, and to offer a service that is perceived to be of higher quality. The fees charged by private sector providers often restrict access to higher-income groups.

But even with such bias towards higher-income groups private health care providers have been increasing dramatically in terms of both numbers and size during the past decade. Even where governments are reluctant to encourage private sector participation, budgetary pressures and strong donor support for privatisation and smaller government have encouraged private sector expansion in health. When government health care provision does not keep pace with public demand, as happened in China, the private health sector, both non-profit and for-profit expands. In Malaysia, the proportion of

physicians in private practice rose from 43 percent in 1975 to 70 percent of the total number of physicians in the country in 1990. In Indonesia, about half of all hospitals are privately owned and operated; in Zimbabwe that figure is 66 percent (Gaag, 1996). Even in countries with health systems, that are entirely publicly funded and managed and where healthcare is provided by government free of charge, it is common for patients to pay significant fees or 'gratuities' either to public physicians who are also operating in private practices or as under-the-table payment (Basch, 1999; Gaag, 1996).

Uruguay provides a good example of a middle income country, which has experienced increasing private involvement in health care. While public health care in the country is widely available and 40 percent of the population rely on this sector, it is generally regarded as inferior to privately provided services. Salary cuts, downsizing, infrastructure deterioration and rising costs in the public health sector contributed to the decline of health service quality. Most middle class people, more than half of the population, get health care through the country's 53 medical non-profit cooperatives (IAMCs) which are financed by the social security system. In this system, workers and employers buy individual health insurance as collective affiliations. Medical service providers negotiate monthly rates and co-payments (which are charged for all services except hospitalisation) directly with the IAMCs. The Ministry of Public Health monitors IAMCs for quality, the Ministry of Finance for cost. The private for profit sector in Uruguay offers partial insurance packages that supplement the standard health insurance available through the public sector and IAMCs. While still a relatively small share of the market, the number of these partial insurances schemes has grown substantially over the past five year (Gagg, 1995: 51-52).

This health system in Uruguay demonstrates the transition from public sector provision to a mixed public-private system with increasing private sector participation. The public sector is not limited to providing services but it can also take actions on subsidies and regulation (Hughes, 1998: 84). In the Uruguay case, government subsidises the private sector to provide health services and regulates the private sector performance through the Ministry of Public Health and Ministry of Finance. As in Uruguay there are other examples of governments which subsidise private health care providers. In many African countries, such as Malawi, Uganda, and Zambia, government subsidises the operating expenditures of church hospitals and clinics in rural areas and the training of their health

personnel. In Bangladesh, Kenya and Thailand governments utilise assistance from donors to support the work of traditional healers in controlling infectious diseases such as malaria, diarrhoea and AIDS (World Bank, 1993).

From the mid-1980s, the view that the state in developing countries should be the main provider of these services has been subjected to question. The World Bank's 1993 *World Development Report* indicated that the main problem with universal government financing for health is that it subsidises the wealthy, who could afford to pay for their own services, and thus leaves fewer government resources for the poor. It is argued that current use of traditional healers and medicines, private practitioners, private hospitals, and personal expenditures on drugs and pharmaceuticals, suggests that individuals in developing countries are prepared to pay for at least some kinds of health services (Hanmer, 1994). Most private health expenditures are out-of-pocket or user fees which pay for health services or the purchase of medicines. It is currently estimated that 50 percent of all global spending for health care is accounted for by the private sector. The amount of spending varies considerably across countries and regions (Table 2.7) and can be considerable in developing countries. Private spending on health is lowest in the formerly socialist economies, 29 percent. Private health expenditure in India was as high as 78 percent while in Asia (not including India and China) and the Pacific islands 61 percent of total health expenditure was for private sector services. Private health expenditure in most other regions varies roughly between 40 and 60 percent of total health expenditure (Gagg, 1995: 15). These figures show that health care is a burden which is often shouldered by the people, and by all social classes. The push for further privatisation indicates that this burden may well increase. The interesting finding in Table 2.7 is that the developed market economies have lower proportions of private sector expenditure on health than most developing countries.

Table 2.7 The Distribution of Health Care Spending between the Public and Private Sectors, by Region

<i>Region</i>	Percentage of Total	
	<i>Public</i>	<i>Private</i>
Established market economies	61	39
Middle East	57	43
Former socialist economies	71	29
India	22	78
China	59	41
Other Asia and Pacific	39	61
Latin America and Caribbean	61	39
Sub-Saharan Africa	53	47

Source: Gaag, 1995, *Private and Public Initiative*, p. 15.

The leading factors accounting for the increasing role of private sector in providing health care in developing countries have been identified as demographic changes, advance in medical science and public expectations for health services (Bennett and Tangcharoensatien, 1994). First, the demographic changes include the aging of the population and the decline in the proportion of the population of working age. These changes will both increase the demand for health care and for particular types of health care, and at the same time limit the ability of health services to respond to this demand. Second, advances in medical science will give rise to new demands within health services. These advances cover a range of possibilities, including innovations in surgery, drug therapy, screening and diagnosis. Third, public expectations of health services are rising as users demand higher standards of care. In part, this is stimulated by developments within the health service, including the increased capability of new technology for improved health care. More fundamentally, the demand for better services stems from the emergence of a more educated and informed population, in which people are accustomed to being treated as consumers rather than patients and thus demand 'value for money.'

Until the 1980s the public sector's responsibility for health care provision was an orthodoxy in most of the developing world and in many rich market economies. However, several events and forces emerged to challenge that orthodoxy. In 1983, the World Bank's annual *World Development Report* focused, for the first time, on public sector management. It criticised traditional bureaucratic structures and process for their inefficiency and poor performance, a chorus subsequently taken up by many others. There was a call for substantial public sector reform. This was a message reiterated, often with considerable force, by the dominant school of economic thought - neo-classical economics. It was argued that governments were engaged in activities which belonged in the private sector. Leaner and meaner government was the answer. In addition, to make the public sector more efficient and effective, private sector methods were recommended for public sector activities (Osborne and Gaebler, 1992: 12). Radical public sector reforms were first applied (and still continue) in the wealthy commonwealth countries - UK, Australia, Canada and New Zealand. The philosophy underlying these reforms and the actual measures implemented became known as the New Public Management (NPM). The efficacy of NPM was promoted by its practitioners and multilateral aid agencies who were busy funding and encouraging public sector reform in the developing world. Thus, items from the NPM toolbox found their way into suggestions for public sector reforms to the centralised, often poorly performing, bureaucracies of Asia, Africa and Latin America. All agencies and sectors, including health, were candidates for reform but what was involved in the NPM? First, it involves a focus on management, not policy, and on performance appraisal and efficiency. Second, it recommends the disaggregation of public bureaucracies into agencies which deal with each other on a user-pays basis. Third, the NPM promotes quasi-markets and contracting out to foster competition. Fourth, it demands cost-cutting. Fifth, it involves a style of management which emphasises, amongst other things, output targets, limited-term contracts, monetary incentives and freedom to manage (Rhodes, 1991; Hughes, 1998).

Assisting the push for health sector reform has been an economic debate on the nature of health and health services. What sort of good is being provided? The answer to this question has an impact on the public-private mix aimed for in specific countries. Some

argue that public health should be solely provided by the public sector since it is a public good. However, a public good must satisfy two criteria. First, unlike a private good, more than one individual can simultaneously receive benefits from a public good. That is, a public good exhibits no rivalry in consumption, thus allowing one person to increase his or her consumption of a good without diminishing the quantity available for others. Second, it is costly to exclude non-paying individuals from receiving the benefits of a public good (Santerre and Neun, 1996: 243). National defence is a good example of a public good. Everyone simultaneously benefits, and it is impossible to exclude non-payers from receiving these benefits.

With the private purchase of medical services, the benefits are almost completely internalised by the individual buyer, and the cost of excluding non-payers from receiving medical care is very low but highly inequitable. Prospective patients can be required to pay the necessary fee at the door of medical facility or be denied access to medical services. Thus, healthcare can better be described as merit goods rather than public goods (Musgrave and Musgrave, 1989: 57; Santerre and Neun, 1996: 244). Musgrave and Musgrave (1989) point out that with merit goods people are often bound by similar historical experiences or cultural traditions. The common bond gives rise to common interests, values and wants, which individuals feel obliged to support as members of the community. For example, people in the community may believe that everyone needs at least some minimal amount of food, housing or medical services and therefore are willing to support the provision of these merit goods through redistribution of income. Using this argument, health care is seen as essential to people, but is not a public good. The private sector could share the responsibility in providing healthcare. In practice, most countries have an uneasy mix of private and public provision of these merit goods, without there being any definitive answer as to the most desirable point on the public-private continuum (Hughes, 1998: 99). A leading argument, supported by NPM, asserts that a large role for the private sector will help improve quality and efficiency in social sectors, even in public schools and health facilities. But critics warn that private providers - especially private for profit providers - may reduce quality by lowering inputs such as reduction of doctors' salaries. Critics also fear that private providers will try to increase their profits by giving services that are at best unnecessary, and at worst harmful

(Gaag, 1995). The arguments from all sides are based on the idea that the principal objectives of health sectors are to provide quality health care which is distributed equitably, run efficiency and which is socially accountable to the people. In this thesis these major concepts will be operationalised to guide the empirical enquiry in Northeast Thailand. However, in this chapter the task is to elaborate on the meaning of these concepts (equity, efficiency and quality) and the ways in which they can be measured.

Equity

The declaration at Alma-Ata Conference in 1978 endorsed primary health care as the means of attaining the WHO goal of Health for All by the year 2000. The declaration expresses a philosophy of thinking about health and health care in which 'the importance of equity as a component of health' is the first amongst five themes (WHO, 1978; Walt and Vaughan, 1981). Since then the goal of equity has been widely used in health policy in many countries. There are various applications of the term in relation to health, including the following (Green 1999; Green, 1994):

- equal health; meaning equal in health status;
- equal access to health care;
- equal utilisation of health care;
- equal access to health care according to need; and
- equal utilisation of health care according to need.

The first of these accords most closely with WHO goal of health for all. However, it has to be recognised that it is globally unattainable. The second and third definitions are also unworkable, and possibly undesirable. It is undesirable, since one would not regard a situation as equitable where everyone used health care the same number of times (equal utilisation), irrespective of their degree of ill health. Similarly, equal access of health care in the world of limited resources may imply unequal access relative to need. Given the importance of social justice in the concept of equity, the last two definitions are applicable. If equity is defined narrowly to imply physical access alone, it is impossible to achieve. It is impossible to envisage a health system where everyone with equal needs lives at exactly the same distance from similar health facilities. The presence of any other factor inhibiting the take up of health services is likely to make 'access' alone an

unacceptable definition. If the health system charges a fee, then access is dependent on ability to pay as well as on proximity to the service. An alternative definition to access concerns utilisation. Utilisation of health services is recognised to be related to a variety of factors including physical distance from the health facility; cost involved in using the health facility; fees charged; cost and time of travel to and from the facility; drugs costs; lost income during time spent in attending the health facility; attitudes of employers to absence from work; perceptions of need and of the utility of health care; cultural constraints on the use of medical care; and attitudes of health professionals. A definition focusing on utilisation and incorporating some of the factors listed above is conventionally used to measure equity in health (Green, 1994).

Equity can be also considered by distinguishing between 'vertical' and 'horizontal' equity (Green, 1994; Siksiriseerikul, 1996; Suphanpong, 1997). Horizontal equity means that 'equals should be treated equally' It implies that individuals with the same income should pay the same amount of net taxes. In term of health, it means individual with the same need should have access to the same treatment (Santerre and Neun, 1996: 273). Horizontal equity criteria are, equal expenditure for equal need such as equal nurse cost per bed ratios in all acute care in hospitals; equal utilisation for equal need such as equal length of stays per specific health condition; equal access for equal need such as equal waiting times for treatment of patients with similar conditions; reduced inequities in health such as equal age- and sex-adjusted standardised mortality ratio across health regions within a country (Suphanpong, 1997). Vertical equity means 'unequals are treated unequally' (Santerre and Neun, 1996: 271). Vertical equity criteria are, unequal treatment for equal need such as unequal treatment of patients with treatable serious conditions. Vertical equity uses progressive financing based on the abilities to pay of individual such as progressive income tax rates. It is used where health services are financed mainly from income tax. It is suggested by Suphanpong that equity in access to health care and utilisation should be provided using horizontal-equity criteria. On the other hand, equity in finance should follow vertical-equity criteria (Suphanpong, 1997).

Efficiency

Since increase of costs and limitation of budgets are major problems of health service systems, seeking efficiency has been a ubiquitous pursuit. Efficiency is a measure of the relationship between input and output (St Leger et al., 1992). It is the optimal use of resources, or the minimising of cost (Santerre and Nuen, 1996). There are two types of efficiency, allocative efficiency and technical efficiency. Allocative efficiency refers to allocation of resources to those structures, organisations or individuals which can be expected to yield maximal returns in terms of the specific objectives to be attained. Indicators of allocative efficiency include; percentage of total health expenditure on hospitals; shares of expenditure on activities identified as high and low priorities; and share of staff time on identified high and low priorities. Technical efficiency is concerned with minimising cost by trying to organise a given system in such a way that the appropriate kind or level of care is provided by the most adequate or appropriate element of the health system. Some examples of technical efficiency are the number of drugs prescribed per out-patient visit, percentage of out-patient cases receiving antibiotics; and percentage of children under five receiving oral rehydration solution (ORS) to treat diarrhoea (Suphanpong, 1997).

One means of increasing the effective resources available within existing cash limits is to look for ways of improving the efficiency of existing services. A variety of techniques and policies have been suggested in various contexts, including the following (Green, 1994: 106):

Appraisal: techniques such as cost-effectiveness analysis may suggest alternative approaches to particular health problems which are more efficient.

Contract out: buying-in of services such as catering or cleaning from outside sources where these are shown to be more efficient than internal provision.

An internal market: development of internal budget systems within an organisation which is constituted as a quasi-market, with different budget or cost centres selling services such as X-ray to each other. The assumption behind such a strategy is that the simulation of a market will improve efficiency.

Information dissemination: dissemination of comparative information on the performance of different parts of the health service or of an organisation, in the expectation that either peer-group pressure or management incentives will lead to changes in practice.

Involvement of clinicians in management: clinicians are typically the individuals who, through their decisions, have most influence on how resources are spent. Increasing their involvement in budgeting and management may be important as a means of developing greater awareness of cost and efficiency.

These methods are essential for improving efficiency especially in hospital management. Some of these techniques such as contracting out are now widely used. Cost effectiveness analysis is important in many sectors such as pharmacies and choices of different treatments. Most medical staff have necessarily become more aware of the need for efficient practices.

Quality

Providing quality health care to the people is one of the main objectives of health services. The quality of medical services is reflected in structures, processes, and outcomes of medical care providers (Donabedian, 1980, 1988; Santerre and Neun, 1996). Structural quality is reflected in the physical and human resources of medical care providers, such as the facilities (level of amenities), medical equipment (type and age), personnel (training and experience) and administration (organisation structure). Process quality reflects the specific actions health care providers take on behalf of patients in delivering and following through with care. Process quality include access (waiting time), data collection (background history and testing), communication with the patients, and diagnosis and treatment (type and appropriateness). Outcome quality refers to the impact of care on the patient's health and welfare as measured by patient satisfaction, work time lost to disability or post-care mortality rate.

Suphanpong (1997) views good quality health care in four components: effectiveness, holistic care, continuity and integration. Effectiveness means producing the desired

positive effect on the actual or potential health problems by using the appropriate level of technology. Holistic care implies considering not only the patient's physical dimension but also his/her psychological, social and cultural dimensions. Continuity means providers have to maintain services until the end of health problems or until the end of high risk of casualty or disability. Integration in health care is to provide all forms of health care as needed. When patients come for health services, providers should not confine their services to only curative measures, prevention or health promotion. They have to consider all types of services which meet the needs of their clients. For example, when a patient comes to be treated for hypertension, the doctor should not only give medicine but also advise on such things as appropriate food, exercise and how to prevent complication.

Maxwell (1990), has suggested six aspects for determining the quality of health care: access to services, relevance to need for the whole community, equity, social acceptability, effectiveness, efficiency and economy. There is considerable overlap between these aspects and indicators of quality. The different versions of quality can be seen as complementary and have been combined for the empirical study in Northeast Thailand. Several of the common indicators will be used to measure health care provision quality.

Conclusion

The health of people in the developing countries has been improving over the past 50 years. The degree of improvement varies among regions and countries. People in most regions now tend to live longer except for some countries in Africa where AIDS and civil wars have reversed life expectancy. In many developing countries a transition is occurring from communicable diseases to noncommunicable diseases. Such diseases include heart diseases, diabetes, cancer and hypertension. But high incidences of communicable diseases often remain rendering the task of health services even more difficult.

In developing countries the disease transition places new burden on often strained health sectors. Cash-strapped governments are faced with higher costs for new diseases, growing populations and demands for better quality treatment. Governments of most developing countries have played an important role in providing health care to the people as they have most often been the major provider. However, the public sector has been increasingly criticised as highly centralised, rule-bound and inefficient, comprised of organisations that emphasis process rather than results. They are seen to impede good performance and to work poorly in the rapidly changing, information-rich, knowledge-intensive society and economy of today. There are powerful arguments that governments are overextended and should limit their activities to certain core activities such as the preservation of law and order, environment protection, provision of public goods and development of human capital, foreign relations, defence and some infrastructure, leaving the rest to the market. Government should no longer be a sole provider, but should play a crucial role as a facilitator and supporter. In government-run health systems, there have been problems of misallocation, inequity, inefficiency and exploding costs. These have led to more private sector involvement in health care. The private health sector, both non profit and for profit, has been continuously increasing its activities and participation in health care provision. This change is in line with the ideas of the economic orthodoxy of neo-classical economics and with the NPM both of which emphasise privatisation of service delivery.

The specific concern of both public and private sectors is to provide quality health care to the people with equity and efficiency. Many sources argue that the private sector provides better quality of health care more efficiency than the public sector because it is ruled by market discipline and uses private sector management methods. Some people are concerned that private for-profit providers might try to reduce inputs and render unnecessary services to gain more profit. However, in the present environment of public and private mix, there is certainly more competition between health care providers both between and within sectors. The public sector cannot maintain monopoly over health care. The private sector has become an integral part of health systems. Both public and private sectors have to make sure that they can compete in the current health market. Such competition means that governments have to find a variety of measures to improve

their health services. This means that public health agencies must be more concerned with management, not policy, and on performance appraisal and efficiency; the use of quasi-markets and contracting out to foster competition; cost-cutting; management which emphasises output targets; limited-term contracts; monetary incentives; and freedom to manage. For this thesis the overriding question is whether the public sector or the private sector gives the best performance. In subsequent chapters this question will be investigated through empirical study in Northeast Thailand. A necessary preliminary step is to trace the development of health services in Thailand.

Chapter Three

Health Development in Thailand

This chapter provides a detailed analysis of the health care system in Thailand since the start of modern medicine in 1828 until 1998 when the country was experiencing economic crisis. Such contextual information is important for understanding the conditions which have led to private sector involvement in health care provision in Thailand. The chapter begins with general information concerning society, economy and government administration in Thailand. This is followed by a review of health care development in Thailand, and a discussion of factors affecting the health of Thai people and health problems in the country. The process of private sector involvement in health care is clearly elaborated.

Geography, Demography and Socioeconomic Status

The Kingdom of Thailand is located in Southeast Asia on the Gulf of Thailand and the Andaman Sea (Figure 3.1). Thailand covers a land area of 513,115 square Kilometres. It is divided into four natural regions: North, Central, Northeast, and South. The country has a population of approximately 60.8 million with a growth rate of about 1.1 percent per annum (January 1998) (Bureau of Health Policy and Plan, 1998). There is an increasing proportion of the population in the working ages and old ages categories while there is a decrease in the dependent group (age 0-14 years) (see Table 3.1). The average family size has dropped from 5.6 members in 1960 to 4.4 members in 1990 and is expected to fall further to 3.5 members by 2010. Around 40 million of the Thai population are in the rural areas and the remaining 20 million reside in urban areas. There were about 8.4 million people living in Bangkok, the capital city. The national average population density in 1997 was 119 people per square kilometre. About 95 percent of the citizens were ethnic Thais with the remainder comprised of Chinese, Indians and

Figure 3.1 Map of Thailand



Source : www.asiasource.org/graphics/maps/thailand_map.gif

other ethnic minorities. Thai language is officially and routinely used for speaking and writing. Most of the Thai people (95.2 percent) are Buddhist, 4.1 percent are Muslims, and the rest are Christians and other religions.

Table 3.1 Thailand's Population Characteristics, 1960-2010

Characteristics	1960	1970	1980	1990	2000	2010
Total Population (million)	26.3	34.4	48.8	54.5	62.4	67.2
Percentage of population age 0-14	43.1	45.1	39.2	30.5	25.7	22.2
Percentage of population age 15-59	52.4	50.0	55.3	62.2	65.2	66.5
Percentage of population age 60 up	4.5	4.9	5.5	7.2	9.2	11.4
Population growth rate	3.5	3.2	2.3	1.3	0.9	0.6
Estimated average family size	5.6	6.0	5.4	4.4	4.1	3.5
Percentage of urban population	12.5	13.2	17.0	18.7	30.0	40.0

Source: Bureau of Health Policy and Plan, 1997, *Thailand Health Profile 1997*, p. 23.

Until the 1960s, the Thai economy was agriculture-based, mostly subsistence farming for household consumption with little commercial or export orientation. Thailand then moved into industrial manufacturing for import substitution and subsequently into export-oriented industrialisation. Agriculture also developed a more commercial character. The country's development policies and activities are directed by the five-year National Economic Social Development Plans. The First Plan was launched in 1961 and the country is now in the Eighth National Economic Social Development Plan (1997-2001) (Bureau of Health Policy and Plan, 1997). Over this period Thailand has changed from being an agriculturally based economy to an industrially based one (manufacturing and services). In 1960, the agricultural sector accounted for 40.5 percent of GDP while

the industrial sector contributed only 13.6 percent. However, in 1995, the industrial sector accounted for 30 percent of GDP followed by 18 percent for the commercial sector, 13 percent in the services sector, and only 10.8 percent of GDP from the agricultural sector (Bank of Thailand, 1997).

A decade ago, the term 'Asian Miracle' was applied to a group of 'high performing Asian Economies', including Thailand (World Bank, 1993b). Over the eight years ending in 1995, the Thai economy was the fastest growing in the world (Bank of Thailand, 1997; Warr, 1997). The average rate of real GDP growth was 10.4 percent, and inflation was low, averaging 5.3 percent. Two factors produced the dramatic economic growth: growth of exports, especially exports of labour-intensive manufactured goods; and very high inflows of foreign capital, including direct foreign investment. Export growth over this period averaged 28 percent per annum and as a share of GDP exports surged from 23 percent in 1988 to 34 percent in 1995.

Thailand was classified by the World Bank as a lower middle income country in 1996. The lower middle income countries were those in which GNP per capita was \$726 to \$2,895 (World Bank, 1997: 238-239). It is one of the world's five and Asia's only net exporters of food. Thailand is the world's largest exporter of rice, natural rubber and tapioca. These agricultural product and manufactured products such as textiles, clothes and plastic products accounted for over 70 percent of the total exports. Sustained growth seemed assured and the *Economist* magazine predicted that Thailand would become the world's eighth largest economy by the year 2020 (Leekpai, 1998). To accomplish this Thailand along with other East Asian economies liberalised its trade, investment and financial regimes. The economic potential of Thailand served as a strong magnet that drew in huge flows of foreign capital for investment in Thailand. However, an overvalued exchange rate, excessive property speculation, and weak financial institutions contributed to a serious economic crisis in Thailand in mid-1997 which spread throughout Asia and affected other parts of the globe (Boonyoen et al., 1998; ADB, 1998). The Thai government sought external help from the International Monetary Fund (IMF) in August 1997. Despite a large loan, the recession deepened as the

exchange rate continued to fall, financial institutions folded, companies shed jobs and the property market collapsed.

There was widespread concern that negative economic growth rates could translate into slower progress in achieving social development targets. The national budget was severely cut resulting in job losses and services cuts. The budget of the Ministry of Public Health (MoPH) was reduced by 14.58 percent (Table 3.2) (Wibulpolprasert et al., 1998) possibly leading to a deterioration in services and hence in the well being of the people, especially the poor.

Table 3.2 Fiscal Year 1998 Budget Revision in Response to Economic Crisis

Ministry	Percent of total budget	Percent of budget after cut	Percent adjustment
Defence	10.72	10.13	-23.03
Agriculture	8.23	7.82	-22.61
Communication	10.40	8.47	-33.61
Interior	18.18	6.59	-25.61
Labour & social welfare	1.14	1.18	-15.40
Education	16.94	18.54	-10.66
Public health	7.14	7.49	-14.58
Industry	0.56	0.51	-25.71
Total	100.00	100.00	100.00

Source: Wibulpolprasert et al., 1998, The Economic Crisis and Responses by the Health Sector in Thailand 1997-1998, p. 4.

Government Administration in Thailand

Unlike other states of Southeast Asia, Thailand never came under colonial rule. As Siam, the country was governed by a king until Western-inspired democratic forces compelled King Rama VII to accept a change to a constitutional monarchy in 1932 and

the kingdom was renamed Thailand in 1939. In the subsequent years, there have been frequent changes of governments ranging from authoritarian military regimes to democratically elected ones. Fifty-three cabinets were formed between 1939 and 1998. Most of the elected governments have been coalitions of parties, which were often characterised by tensions and conflicts.

There are three tiers in Thailand's government administration: central, provincial and local administration. The first tier, the central administration, has the king as the head of state with the legislative power exercised by the parliament. The administrative or executive power is through the cabinet or Council of Ministers, and the judicial power rests with the courts. The central administration system consists of 15 ministries. In each ministry, there are several departments or agencies equivalent to a department. In all, there are 267 departments across all ministries. The MoPH is in charge of health care services to the people. There are seven departments in the MoPH. The second tier, the provincial administration, is made up of the governmental units at the regional or provincial level. They function with delegated authority from various ministries and departments. Provincial administration is under the supervision of the provincial governor, an appointed official of the Ministry of Interior (MoI). Line ministry officials are assigned to provincial offices from central administrative agencies. In 1998, the provincial administration consisted of 75 provinces, 795 districts and 8,129 sub-districts. The third tier, the local administration, is an autonomous administrative authority of the people in each administrative locality. The local administration must have at least four characteristics: being a juristic body; local administrators and local council member all or partially elected by the people; having its own revenue budget; and having administrative autonomy. In Thailand there are four types of local administrative bodies, namely Provincial Administrations (75 provinces), Municipalities (1,130 cities and towns), Tambon Administration Organisations (6,397 sub-districts); and special types of local authorities as designated by laws, i.e, Bangkok Metropolitan Administration and Pattaya city (Wibulpolprasert ed., 2000).

Health Sector Development in Thailand

Before 1828, Thai people were not aware of modern or western medicine. They used traditional medicine and other old beliefs or superstitious rituals. Dr. Dan Beach Bradley, a Protestant missionary, introduced modern or western medicine to Thailand in 1828, the fifth year in the reign of King Rama III (MoPH, 1995; Bureau of Health Policy and Plan, 1997). He initiated a disease prevention programme with smallpox vaccination. Later on, several foreign doctors came to provide modern medical services to people in Bangkok. The public sector started its role in modern health services with the establishment of Siriraj Hospital by King Rama V to provide curative care to patients in 1886. The use of modern medicine has grown and gradually replaced traditional medicine. During the period 1887-1932, the public health system in Thailand was still oriented to the control of epidemic diseases such as cholera, smallpox, yaws and malaria which had taken a heavy toll of life for centuries. The Ministry of Public Health Affairs was established in 1942 and in the following twelve years hospitals were constructed. Subsequently, provincial health offices were established in all provinces. Dangerous contagious diseases were effectively controlled and prevented. For example, smallpox and bubonic plague were eradicated from the country, while malaria was contained (MoPH, 1995).

From 1961, the Thai Government began to produce guidelines for national health development which provided a clearly defined operational framework. During the past three decades, the Health Development Plans have been designed and implemented continuously in four distinct phases: (MoPH, 1995; Bureau of Health Policy and Plan, 1997; Bureau of Health Policy and Plan et al., 1996).

Phase One (the First-Third Plans, 1961-1975)

Development activities between 1961 and 1975 were influenced by western health systems and focused on overall improvements in the national health. The government played the role of health services provider. Investments were made on health infrastructure, particularly hospitals in Bangkok, medical schools at various universities, and provincial hospitals, as well as on the production and development of nurses,

midwives and male health workers. Major health programmes in this phase included family planning, maternal and child health, communicable disease control and medical services for the poor. At the end of the Third Plan (1975), medical and health manpower development, especially the production of medical doctors and nurses, was still below the set target. The expansion of health services in terms of numbers of beds, and numbers of health facilities had failed to meet the targets. The two areas in which the set targets were achieved were the family planning programme and the supply of safe water in villages.

Phase Two (the Fourth-Sixth Plans, 1976-1991)

Between 1976 and 1991, the government realised that social and rural development had been neglected resulting in disparities in income distribution and growth. Thus, in the health sector efforts were made to increase and improve the provision of medical services to remote rural areas and to decentralise management authority to the local level to better address community problems. This was manifest in the adoption of the 'primary health care (PHC)' approach in 1977 which encouraged the community to identify local problems and their causes, and to make use of new knowledge that would help the community to resolve their own problems. These primary health care strategies aimed to achieve the long-term goal of 'Health for All by the Year 2000'. With this approach, community-based activities were promoted. PHC emphasised community participation in the crucial areas of health education, nutrition, maternal and child health (MCH), and family planning. Control and prevention of local endemic diseases, sanitation, provision of safe water supply, immunisation against communicable diseases, treatment of common illnesses and provision of basic household drugs for the community as well as the expansion of health infrastructure to cover 100 percent of rural communities were also included in the PHC approach (Primary Health Care Office, 1985). PHC also attempted to strengthen the participation of groups and organisations in the community through village health volunteers (VHVs), village health communicators (VHCs), youth groups, housewives' groups, community family planning volunteers, Village Development Committees, Tambon Councils and other relevant community organisations.

This second phase of health development also included the adoption of the national health planning system using such techniques as country health programming; the managerial process for national health development (MPHND); problem, policy and strategy analysis; and the planning, programming and budgeting system (PPBS). Major programmes undertaken in this phase were the expansion of district and tambon health facilities to cover all such localities; development of all elements of primary health care; and improvement of rural health development as part of the national rural development programme. Emphasis was given to poverty-stricken areas, and to programmes on health promotion, disease prevention, and health support systems such as curative services for underprivileged children, the elderly, and the disabled.

At the end of the Sixth Plan (1991), the administration of basic health services was quite effective. The coverage of PHC facilities was reported as 98.6 percent of all sub-districts. Community hospitals covered 89.29 percent of districts. The production of health personnel and the development of health laboratory services reached the set targets. The training of VHVs and VHCs covered up to 98.4 percent of communities nationwide. Village health communicators (VHCs) were subsequently upgraded to village health volunteers (VHVs). The MCH health programme exceeded the target access by as much as 70 percent. Indicators showed the health of the nation to be improving.

Phase Three (the Seventh Plan, 1992-1996)

The Seventh Plan emphasised equity in the development of health services through such strategies as enhancement of management system efficiency, use of new technologies, innovation in health manpower development, and establishment of health centres as contact points of health-for-all activities. The Decade of Health Centres Development, a 10-year project (1992-2001), was launched in this phase. The health card system, to which people could subscribe at the cost of 500 Baht per year to enable them to get treatment from hospitals with no extra charge was expanded to cover over two-thirds of the population nationwide. High priority was also given to service quality improvement in government institutions and to addressing the brain-drain problems (personnel moving to the private sector). At the end of this plan, government health facilities at all levels covered all urban and rural areas, but with a severe shortage of doctors. The population

growth rate dropped to 1.3 percent in 1994 as a result of the success of family planning. Government health security schemes covered 72 percent of Thai people. Immunisation, particularly basic immunisation for children under one, covered the target population, resulting in a decline of morbidity due to such diseases.

Phase Four (the Eighth Plan, 1997-2001)

This current phase (1997-2001) emphasises human-centred development, particularly the quality of life. Health programmes have focused on health services quality development, 100 percent health card system coverage, management efficiency improvement, and health behaviour changes for health promotion including disease prevention. Major targets to be achieved by the end of the year 2001 are classified into five groups as shown in (Table 3.3). Statistical indicators show the level of achievement.

Table 3.3 Targets of the Eighth National Health Development Plan, 1997-2001

Target	Statistical indicators
<p>1. Health impact targets</p> <p>1.1 Reduce IMR to 21/1,000 live births</p> <p>1.2 Reduce MMR to 20/100,000 live births</p> <p>1.3 Increase life expectancy at birth:</p> <ul style="list-style-type: none"> - Female to 72.20 years - Male to 67.91 years 	<p>26.1/1,000 live birth (1995-1996)</p> <p>10.6/100,000 live birth (1997)</p> <p>- Female 74.99 years (1995-1996)</p> <p>- Male 69.97 years (1995-1996)</p>
<p>2. Targets for reduction of health problems</p> <p>2.1 Reduce malnutrition: 80% of children aged 0-5 years are growing up according to the standard growth rate of which defined by: age, weight and height</p>	<p>Children with normal growth, 92 percent</p> <ul style="list-style-type: none"> - 8.9% (1st degree malnutrition) - 0.6% (2nd degree malnutrition) - 0.01% (3rd degree malnutrition)

Target	Latest statistics
<p>2.2 Reduce the rate of new HIV infected cases by 40% by</p> <ul style="list-style-type: none"> - reducing HIV infection rate in military conscripts to not exceeding 1%; - reducing HIV infection rate in pregnant women (aged less than 25 years) to not exceeding 1%; 	<p>- 1.2 % (1998)</p> <p>- 1.49 % (1998)</p>
<p>2.3 Reduce mortality rate from accidents to not exceeding 50 per 100,000 population.</p>	<p>49.7 per 100,000 population (1996)</p>
<p>2.4 Reduce mortality rate of cardiovascular disease to not exceeding 50 per 100,000 population</p>	<p>72.1 per 100,000 population (1997)</p>
<p>2.5 Reduce mortality rate of cancer to not exceeding 40 per 100,000 population.</p>	<p>43.8 per 100,000 population (1997)</p>
<p>2.6 Reduce acute diarrhoeal morbidity to not exceeding 1,000 per 100,000 population.</p>	<p>1,814.12 per 100,000 population (1998)</p>
<p>2.7 Reduce morbidity rate of dengue haemorrhagic fever to not exceeding 60 per 100,000 population.</p>	<p>202.2 per 100,000 population (1998)</p>
<p>2.8 Control the prevalence of pulmonary tuberculosis not to exceeding 76 per 100,000 population.</p>	<p>76 per 100,000 population (1996)</p>
<p>2.9 Reduce tobacco consumption in smokers aged over 15 years to not exceeding 25% of population.</p>	<p>20.5% in population aged \geq 11 yrs: males 38.9 %, female 2.4 % (1998)</p>
<p>2.10 Reduce mental health problem to not exceeding 25%</p>	<p>-</p>
<p>2.11 Reduce mental retardation in infants resulted from congenital hypothyroidism and phenylketonuria by 50%</p>	<p>1:2,500 population, hypothyroidism 1:10,000 population, phenylketonuria (1995)</p>

Target	Statistical indicators
<p>3. Targets for the underprivileged</p> <p>3.1 Increase accessibility to health service to 100 %</p> <p>3.2 Increase the access to health services rates among the underprivileged by 25 %</p>	<p>-</p> <p>-</p>
<p>4. Target on accessibility to health services</p> <p>4.1 Improve the health resources allocation as follows:</p> <ul style="list-style-type: none"> - Bed to population ratio to 1:500 - Doctor to population ratio to 1:3,300 - Dentist to population ratio to 1:9,800 - Pharmacist to population ratio to 1:5,200 -Professional nurse to population ratio 1:900 	<p>1: 475 (1997)</p> <p>1: 3,649 (1997)</p> <p>1: 17,711 (1997)</p> <p>1: 10,178 (1997)</p> <p>1: 1,073 (1997)</p>
<p>4.2 Improve quality and standard health facilities in 80 % of all facilities</p> <p>4.3 Increase the coverage of health insurance to 100 % of total population</p>	<p>-</p> <p>80.3 % (1998)</p>
<p>5. Targets on self-reliance and people's participation in health</p> <p>5.1 Local administration agencies are able to handle their own area-based health problems:</p> <ul style="list-style-type: none"> -In 50 % of municipalities -In 25 % of sanitary districts -In 20 % of Tambon administrative organisations and Tambon councils 	<p>-</p>

Source: Wibulpolprasert ed., 2000, *Thailand Health Profile 1997-1998*, P. 11-13.

Notes: IMR = infant mortality rate

MMR = maternal mortality rate

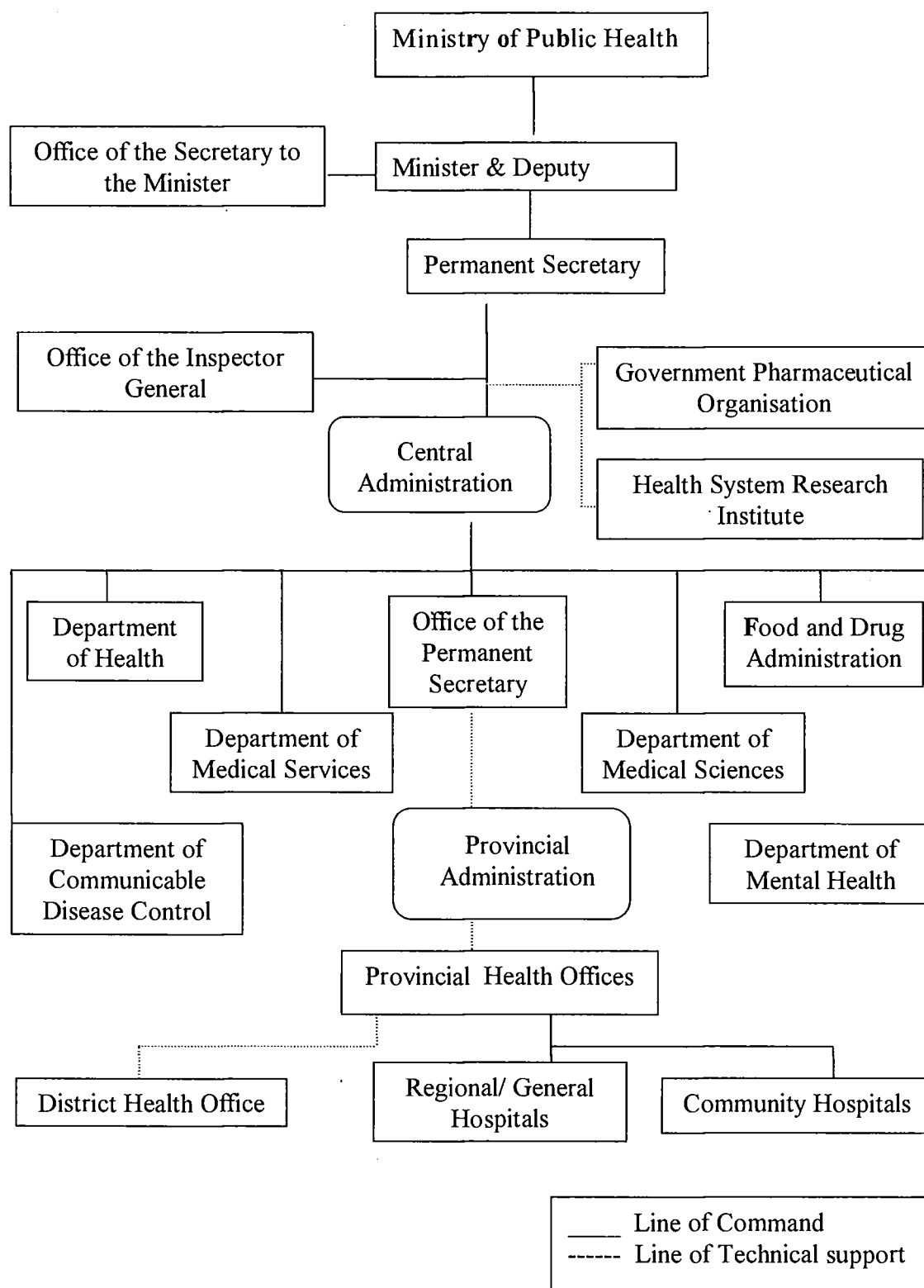
The underprivileged groups include:

1. Children with difficulties such as those who are HIV-infected, HIV- infected orphans, homeless, poor, or illiterate;
2. Children and women in sex industry and who are victims of violence;
3. The handicapped;
4. The elderly without relatives or carers;
5. The poor in rural and urban areas
6. Those on probation, detainees and prisoners; and
7. The minority groups with different cultures such as hill tribes and fishermen.

Health Service System in Thailand

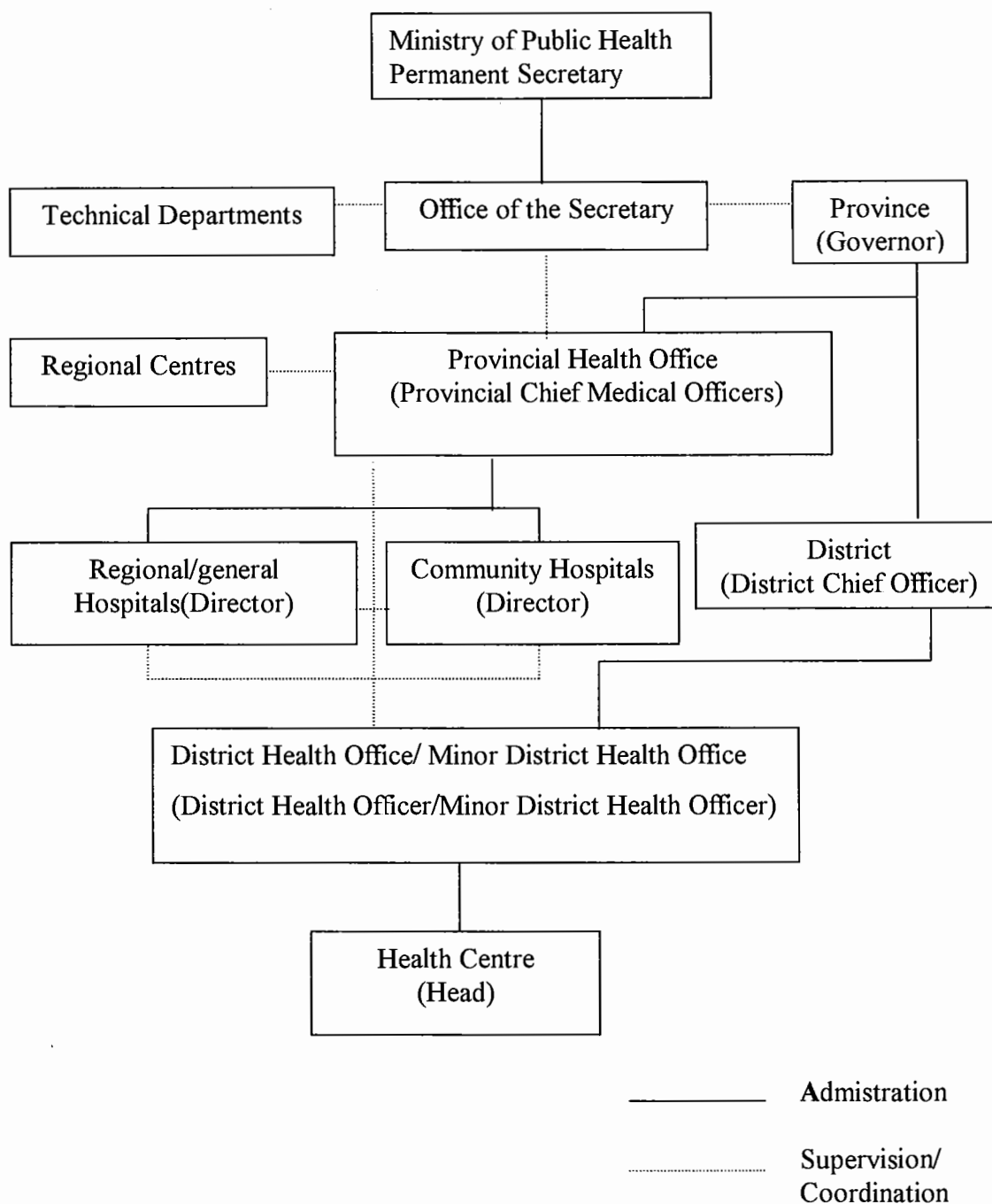
At present, health care provision in Thailand is the responsibility of the Ministry of Public Health (MoPH). According to the Ministry Reorganisation Act of B. E. 2534 (1991), 'the MoPH has authority and functions related to medical care, public health, health promotion and development, food and drug control, anything toxic or hazardous to the public health, and the Red Cross supervision and support' (Bureau of Health Policy and Plan, 1997: 163). The MoPH's major functions include promotion, support, control and coordination of all activities related to physical and mental health including the well-being of people and the provision of health services (Bureau of Health Policy and Plan, 1998). The administrative structure of the MoPH is divided into two parts: central administration and provincial administration.

Figure 3.2 The Organisation of the Ministry of Public Health



Source: Ministry of Public Health, 1994, *Thailand Health Profiles 1994*, p. 109.

Figure 3.3 Provincial Health Administration



Source: Ministry of Public Health, 1994, *Thailand Health Profile 1994*, p.110.

The central administration is composed of the Office of Permanent Secretary, the Office of the Minister's Secretary and other departmental agencies (Department of Health, Department of Communicable Disease Control, Department of Medical Sciences, Food and Drug Administration, Department of Medical Services, and Department of Mental Health) (Figure 3.2). The Office of the Permanent Secretary (OPS) performs functions related to the formulation of health policies and plans, monitoring and evaluation of the performance of other departments. The OPH is also responsible for functions on law enforcement in medical registrations and practices, production and development of health personnel, promotion of health personnel, and development of technical matters. Other departments are technical departments, their function being research and technical matters in health promotion, disease prevention and control, sanitation, and occupational and environmental health.

The provincial administration is under the supervision of the OPS. The Permanent Secretary is in charge of controlling and monitoring all provincial level health activities so that they are performed in accordance with MoPH's policies and programmes. Agencies under the provincial health administration are provincial public health offices, district health offices and health centres (see Figure 3.3). There is a provincial public health office in each province. Under the provincial public health office, there are a regional hospital, general hospitals and community hospitals reporting to the provincial chief medical officer. The district and sub-districts health office in each district/sub-district report to the district chief and are headed by the district/sub-district health officer. The district and sub-district health officer is in charge of management, support, promotion, monitoring and evaluation of activities undertaken by health centres.

The health services provided to the people in Thailand are classified into five types according to the level of care as follow:

Primary care level. This level of care includes medical and health services provided by health personnel at various health units. The smallest unit is the community health post. This is a village level health service unit established in remote areas, covering a population of 500 to 1,000. It is staffed by just one community health worker (an MoPH

employee). Services provided at this level include health promotion, disease prevention and simple curative care. At the sub-districts are health centres. These are first-line health service units, each covering a population of about 1,000 to 5,000 with health staff including a male health worker, a midwife and a technical nurse (graduated from the Sirindhorn Public Health College or the Boromrajchonnani Nursing College). The MoPH is now in the process of assigning additional staff (a dental auxiliary, a professional nurse, and a health specialist) to each health centre. Services provided at this level include health promotion, disease prevention and curative care. The health centre staff run their health programmes according to the standard procedures established by the MoPH under the technical supervision and support of the community hospitals. The highest levels of primary care include health centres of municipalities, out-patient departments of public and private hospitals at all levels, and private clinics. These facilities provide out-patient care to the people and are staffed by doctors and other health professionals.

Secondary care level. Health care at this level is provided by various types of hospital which have different degrees of health services and specialisation. Community hospitals are located in districts or sub-districts and have from 10 to 150 in-patient beds. Community hospitals cover populations of 10,000 or more and emphasise curative care compared to primary care facilities. A general hospital is located in the city centre or big districts and has 200 to 500 bed capacity. General hospitals serve people in the whole province. The regional hospitals have over 500 beds and specialists in all fields of medicine. They serve nearby provinces. There are also private hospitals. Most of the private hospitals are for profit. A few are not-for profit and are run by religious organisation especially Christian ones.

Tertiary care. Health services at this level are more specialised. Tertiary care facilities include 1) general hospitals 2) regional hospitals 3) university hospitals and 4) large private hospitals (generally with over 100 beds). These tertiary facilities serve as health services centres in the regions and sub-regions. Regional hospitals and university hospitals are capable of handling all 20 specialty and sub-specialty fields of medicine such as surgery, internal medicine, psychology and

community medicine, and provide training in various health curricula such as for doctors and nurses. These regional and university hospitals also conduct clinical and health system research.

In this thesis, I am particularly concerned with the performance of hospitals with regards to both in-patients and out-patients. It should be appreciated that in Thailand, hospitals have traditionally played a major role in the provision of out-patient services. Community, general and regional hospitals are still serving more than 55 percent of the country's out-patients. Table 3.4 shows that in 1977 regional/general hospitals and community hospitals provided services for 8.4 million (70.6 percent) out-patients. In 1996 these hospitals provided services to 43.4 million out-patients but the proportion had decreased to 55.1 percent. In contrast, the share of health centres and community health posts rose from 3.5 million to 35.4 million during the same period.

Table 3.4 Numbers of Out-patients at Regional/ General and Community Hospitals, and Health Centres in 1977-1996

Health Facility	Out-Patients (million)						
	1977	1981	1985	1989	1993	1995	1996
Regional/general hospital	5.5	7.5	10.0	10.9	12.0	14.6	15.5
Community and extended hospital	2.9	6.0	11.1	12.9	21.1	22.7	27.9
Health centres and community health posts	3.5	9.2	9.8	15.5	23.6	32.4	35.4
Total	11.9	22.7	30.9	39.9	56.7	69.7	78.8

Source: Bureau of Health Policy and Plan, *Health in Thailand 1995-1996*, p. 144.

Health Care Financing

The national health spending, both public and private in Thailand has been rising significantly during the past 18 years from 25.315 billion Baht in 1989 to 283.576 billion Baht in 1998, an 11.2 fold increase. The per capita health spending has risen 3-fold from 544.94 Baht to 6,662.83 Baht during the same period, an increase in real terms of 12.2

percent per annum (Wibulpolpraset, 2000) (see Table 3.5). The average rate of increase is much higher than the GDP growth rate. As a percentage of GDP, the national health expenditure has increased from 3.82 percent in 1980 to 6.21 percent in 1998 (Bureau of Health Policy and Plan, 1997).

Funding for health has come from three main areas: public money, private funding and foreign aid. Public money has come mainly from the annual budget of the Ministry of Public Health and accounted for 34.74 percent of overall funding in 1998. Contributions from other governmental agencies accounted for 1.76 percent in the same year. In private funding, the household is the major source of health care spending especially through the purchase of pharmaceuticals (Sangsingkeaw, 1995). Household spending accounted for 67.8 percent of all health care expenditure in 1980, rising to 77.7 percent in 1991, but dropping to 63.9 percent in 1998 during economic crisis. Private health insurance accounted for only 1.28 percent of health expenditure in 1998. International financial support for health declined from 1.44 percent of total health expenditure in 1980 to 0.06 percent in 1998. Thailand has now become a donor country providing assistance to other countries in the immediate region and even sells health services to foreign visitors.

Thai national health expenditure as a percentage of GDP was the highest (6.2 percent among Asian countries (Table 3.6). However, the people still take a large share in health spending for self-care. Thai household spending accounts for 65.9 percent of overall health spending which is higher than in other Asian countries except South Korea. The public sector share in Asian countries ranges from 33.3 percent in South Korea to 77.8 percent in Sri Lanka (World Bank, 1998).

Table 3.5 National Health Expenditure (Current Price) in Thailand, 1980-1998

Source of Expenditure	Expenditure and proportion					
	1980		1990		1998	
	Million	Percent	Million	Percent	Million	Percent
Public sector						
MoPH	4,495	17.76	16,225	12.95	65,065	22.94
Other ministries	2,210	8.73	4,558	3.64	4,996	1.76
Civil servants welfare	660	2.61	4,316	3.44	16,444	5.80
State enterprise welfare	111	0.44	723	0.58	2,755	0.97
Workers' compensation fund	100	0.40	443	0.35	1,630	0.57
Social security	-	-	-	-	7,637	2.69
Total	7,576	29.93	26,265	20.96	98,523	34.74
Private sector						
Private health insurance	184	0.88	1,403	1.12	3,633	1.28
Households	17,150	67.75	97,450	77.77	181,237	63.91
Total	17,374	68.63	98,853	78.89	184,870	65.19
Others						
Foreign assistance	365	1.44	184	0.15	183	0.06
Total (%)	365	1.44	184	0.15	183	0.06
National Health Expenditure (in 1000 million Baht)	25,315		125,302		283,576	
As percentage of GDP	3.82		5.74		6.21	
Population (million)	46.45		56.34		60.82	
Per capita health expenditure (Baht)	544.94		2,224.04		4,662.83	

Source: Wibulpolprasert, 2000, *Thailand Health Profile 1997-1998*, P. 200-201.

Table 3.6 Comparison of Health Expenditure among Selected Asian Countries, 1990-1995

Country	Per capita health expenditure (US\$)	Percentage in relation to GDP	Proportion Govt: household
Indonesia	76	1.8	39:61.0
Philippines	60	2.3	56.5:43.5
Sri Lanka	61	1.8	77.8:22.2
Malaysia	220	2.4	58.3:41.7
Thailand	126	6.2	34.8:65.9
Singapore	845	3.6	36.1:63.9
South Korea	518	5.4	33.3:66.7

Source: World Bank, 1998, *World Development Indicators*, p. 204.

Health Status

Economic development and the expansion of health care services have helped improve the health of the Thai population. They have become better educated in health matters, improved nutrition, received proper immunisation and gained better access to health care. Thai people's health status has steadily improved over the past three decades. This is demonstrated in the following trends of major health indicators: improved life expectancy at birth, lowering of infant mortality rate, and decline in maternal mortality.

Life Expectancy at Birth

From 1964 to 2000, Thai people's life expectancy at birth increased from 55.9 to 69.4 years for males and from 62.0 to 74.1 years for females, (Table 3.7). Thai people have progressively been living longer during the past 36 years. However, figures for life expectancy from 2000 to 2005 were expected to decrease to 71.7 years for females. HIV-infection among females accounted for this anticipated decline of life expectancy. The gap between male and female life expectancy decreased from 6.1 years during the

period of 1964 to 1965 to 4.7 years during 1995 to 2000 (National Statistical Office, 1996; Kulpravit et al., 1998; Wibulpolprasert, 2000).

Table 3.7 Life Expectancy at Birth of Thai people, 1964 – 2000

Years	Male	Female	Female-male difference
1964-1965	55.9	62.0	6.1
1974-1976	58.0	63.8	5.8
1985-1986	63.8	68.9	5.1
1990-1995	68.6	72.4	4.8
1995-2000	69.4	74.9	4.7
2000-2005	70.2	71.7	4.5
2005-2010	68.9	73.0	4.4

Sources: Wibulpolprasert ed., 2000, *Thailand Health Profile 1997-1998*, p. 105.

Infant Mortality Rates

During the past three decades, there has been a marked decrease in the infant mortality rate from 84.3 per 1,000 live births in 1964 to 26.05 per 1,000 live births in 1996 (Wibulpolprasert., 2000). The infant mortality rate is expected to increase up to in 2004 to 27.11 per 1,000 live births due to AIDS in mothers leading to infant deaths. Then, the trend of infant mortality rate is expected to decrease to only 22.8 per 1,000 live births in 2014. This figure is anticipated from successful of AIDS control.

Maternal Mortality

The maternal mortality rates (maternal deaths per 100,000 live births) has been similar to infant mortality trends. It dropped significantly from 374.3 in 1972 to only 10.6 per 100,000 live births in 1996.

Epidemiological Transition

Thailand conforms to the trend among developing countries of experiencing an epidemiological transition in the leading causes of morbidity and mortality. Rapid economic growth and urbanisation, changes in the population structure with increasing proportions in older age groups, and income growth have altered the traditional pattern of disease. Chronic diseases such as cancers and circulatory problems are of increasing importance, whilst infectious and childhood diseases, although still prevalent in the poorer communities and socioeconomic groups, are of declining significance (Chunharas and Choprapawon, 1990).

The shift in disease patterns to more chronic illness requires sophisticated and expensive care. The leading causes of death data for Thailand in 1967, 1977, 1987 and 1997 are shown in Table 3.8. The leading causes of death have become more chronic degenerative diseases such as heart disease and cancer. Deaths caused by heart diseases increased from 16.5 per 100,000 population in 1967 to 72.1 per 100,000 population in 1997, a 4.3-fold increase (Wibulpolprasert, 2000). Accidents, a behavioral related disease, accounted for 49.7 deaths per 100,000 population in 1997, an almost 2-fold increase since 1967. Trends of communicable diseases have been decreasing except for pneumonia and AIDS. Pneumonia often occurs as a complication of AIDS and causes deaths in AIDS patients. The incidence of AIDS has been rising since 1984 when the first case was identified. As of 31 December 1996, it was estimated that there were 600,000 to 800,000 HIV-infected people and 61,249 AIDS cases across the country (Bureau of Health Policy and Plan, 1997: 84).

Table 3. 8 Leading Causes of Deaths Among Thai People, 1967-1997
(per 100,000 mid-year population)

Causes of death	1967	1977	1987	1997
Heart diseases	16.5	15.2	42.7	72.1
Accidents	26.2	33.0	41.8	49.7
Cancer	12.6	19.3	31.5	43.8
AIDS (reported)	-	-	-	11.33
AIDS (estimated)	-	-	-	37.73
Pneumonia	19.2	12.9	6.7	9.3
Diarrhoea	27.6	14.9	4.7	0.58

Sources: Wibulpolprasert, 2000, *Thailand Health Profile 1997-1998*, p. 105.

Factors Determining Health in Thailand

Changes in Population Structure

The success of Thailand's National Family Planning Programme has resulted in a drop in population growth from an annual rate of 3.2 percent in 1970 to 1.2 percent in 1996 (Chunharas, 1998). From the target established in the seventh five-year plan it is expected that the growth rate will drop further to only 0.3 percent in 2020 (Bureau of Health Policy and Plan, 1997). Such a population decrease has affected both absolute numbers and the structure of the population (Thomas, 1991). The proportion of children aged 0-14 in the population has dropped while the proportions classified as working population and the elderly have risen continuously. Advances in medical technologies improved public health measures and better nutrition entail fewer people dying of diseases. The proportion of aging population (60 years and above) in the total population increased from 4.5 percent in 1960 to 11 percent in 1992 (Bureau of Health Policy and Plan, 1997: 23-24). This aging population will need particular types of health services to increase their quality of life and enhance their capability of leading a productive life.

Utilisation of Medical Technologies

Thailand is highly receptive to new medical technologies. For example, radiation technologies, magnetic resonance and radioactive substances are now combined with computer technologies for treating diseases in Thailand. These new technologies have helped in prolonging life, increasing the quality of life, alleviating pain and reducing hospital-admission days of patients. A report from the International Association of Producers and Distributors of Medical Technologies indicated that the rate of market expansion for new medical technologies in Thailand has been the highest among Asian countries with a growth rate of 24 percent per year in 1993, while, growth in China, the largest Asian market, was 23 percent (Chunharus et al., 1998: 13). Such technologies are heavily concentrated in Bangkok. These medical technologies have the effect of increasing the country's health expenditure. Resources can be wasted through inappropriate use of technologies such as antibiotics, medical equipment and unnecessary operations (Supchutikul, 1996).

Unsafe Environment

Thai people today are threatened by pollution which, is hazardous to health both in their daily living and working environments. Pollution problems have become highly critical in Bangkok with the quantity of dust in the air at 3.4 times above the acceptable standard. This problem now extends to other large provincial cities. Water pollution affects major rivers nationwide and is caused by both industrial and agricultural sectors. Inappropriate use of chemicals, fertilisers and insecticides are the main causes from the agricultural sector.

Accidents are a major problem in Thailand (Suphanchaimas et al., 1997). At present, traffic accidents rank second among the leading causes of death among Thai people. The death rate caused by traffic accidents was only 26.2 per 100,000 population in 1967. It increased to 49.7 per 100,000 population in 1997 (Wibulpolprasert, 2000; Public Health Information Division, 1996). Thailand Development and Research Institute in cooperation with the Division of Epidemiology, Ministry of Public Health estimated the

economic losses caused by transportation accidents: approximately 12,000 deaths each year causing 57,053.3 million Baht economic loss, about 4.8 million Baht per dead person (Suphanchaimas et al., 1997). It was also estimated that 3,000 to 5,200 victims of traffic accidents became disabled every year causing 3.3 million Baht loss per case. There were 150,000 people injured in traffic accidents who were admitted into hospitals each year. Each of them paid an average of 15,000 Baht for their treatment. Unsafe workplaces also resulted in many accidents. These accidents were caused by machine operations and high-risk working environments (Chunharus et al., 1998).

Health Security

Health services in Thailand are not free of charge and many Thai people can not afford to pay for the services. The government has attempted to help every citizen obtain access to health care by setting up the health security scheme, which is called 'health insurance' in Thailand. This scheme consists of free curative services to the poor, veterans, community leaders, village health volunteers, the underprivileged (the elderly, children aged 0-12 years and the disabled), Buddhist monks and religious leaders. The people have been encouraged to participate in the voluntary health insurance scheme. Under the voluntary health insurance scheme, an individual or family can buy a health card for 500 Baht and the government will contribute another 500 Baht, making a card worth 1,000 Baht of treatments and medicines. This health card is valid for one year.

In 1998, 80.3 percent of the Thai people were covered by health security. Coverage was only 32.9 percent of the total population in 1991 and 72 percent in 1995 (Wibulpolprasert ed., 2000) (see Table 3.9). The biggest share of health insurance in 1997 was medical care for the poor and supported groups which accounted for 45.1 percent followed by medical services for civil servants and state enterprise employees (11 percent). There were 15.8 percent of the people under voluntary health insurance of which 13.9 percent bought MoPH health insurance or health cards and only 2 percent used private health insurance. The compulsory health insurance under the Social Security Fund for workers in the private sector accounted for 8.5 percent of the population.

**Table 3.9 Percentage of Thai Population Covered by Health Insurance Schemes
1991-1998**

Health insurance scheme	Coverage, percent		
	1991	1995	1998
1. Medical care for the poor and social supported group	16.6	43.9	45.1
- The poor	16.0	15.5	13.5
- The elderly	-	4.6	5.5
- Children aged 0-5	-	7.1	7.3
- Primary and secondary school children	-	8.9	11.1
- War veterans	0.3	0.4	0.3
- Community leaders and volunteers	-	5.0	5.4
- The disabled	-	1.8	1.5
- Buddhist monks and novices	-	0.6	0.5
2. Medical services for civil servants and state enterprise employees	10.2	11.0	10.8
- Civil servants and family members	8.7	9.6	9.4
- State enterprise employees and family members	1.5	1.4	1.4
3. Compulsory health insurance	3.2	7.3	8.5
- Social security fund	-	7.3	8.5
- Workers' compensation fund	3.2	-	-
4. Voluntary health insurance	2.9	9.8	15.9
- MoPH health insurance	1.7	7.8	13.9
- Private health insurance	1.2	2.0	2.0
Total percentage of population with health insurance	32.9	72.0	80.3
Total percentage of population without health insurance	67.1	28.0	19.7

Source: Wibulpolprasert, 2000, *Thailand Health Profile 1997-1998*, p. 219.

The wide ranges of health insurance schemes implemented in Thailand has caused a number of problems, especially in the issue of cards and provision of services to patients from different groups. The ceiling of funds allocated for the low-income group, is between 200-300 Baht per person, while that for civil servants is 2,000 Baht, and 800 Baht for those under the social security scheme. There is also a wide gap in the increase of budgets for civil servants' health security and for the social security scheme. The budget for civil servants' health benefit which stood at 6.9 billion Baht in 1992 soared to 139.3 billion Baht in 1996, while the social security scheme budget rose much more slowly, from 3,200 million in 1992 to 4,800 million Baht in 1996 (Nitiyarumphong, 1996). This problem has led the Ministry of Public Health to draft a new health insurance bill to provide equal benefits to all sectors of society and to solve problems caused by the complexities and inequities of implementing the various insurance schemes now in existence. Under this new draft bill, the hospitals will not know which groups their patients are from because all their cards will be the same and the ceiling payment for each treatment will also be the same.

Private Sector Involvement in Health Care Delivery

The private sector involvement in health care in Thai society dates from the beginning of western medicine in Thailand when Dr. Dan Beach Bradley, a Christian missionary introduced western medicine to the country in 1828. However, after the government established its first hospital, Siriraj hospital, in 1886, the public sector gradually took control of health care provision in Thailand. While the government from then up to present directly provides health care, and owns most hospitals, the private sector has been involved in giving health services through private clinics and not-for profit foundations. When private hospitals first started registering with the Ministry of Public Health in 1962 there were only four private hospitals. All of them were located and owned by not-for-profit organisations. The private health sector has been growing in terms of numbers of both hospitals and beds during the past 20 years. The number of private hospital in Bangkok had grown to 140 in 1996 (Bureau of Health Policy and Plan, 1998). Most of this growth has been amongst private for-profit facilities. For the whole nation, the number of hospitals increased by 71.4 percent from 747 hospitals in 1981 to 1,280 hospitals in 1995 (Bureau of Health Policy and Plan, 1997) (Table 3.10). The public hospitals increased from 537 hospitals (71.9 percent of all hospitals) in 1981

to 916 hospitals (71.6 percent of all hospitals) in 1995. The private hospitals increased from 210 hospitals (28.1 percent of all hospitals) to 364 hospitals (28.4 percent of all hospitals) during the same period.

Table 3.10 Number and Proportion of Public and Private Hospitals in Thailand, 1981, 1991 and 1995

Year	Public hospitals		Private hospitals		Total Hospitals
	Number	Percentage	Number	Percentage	
1981	537	71.9	210	28.1	747
1991	807	75.9	257	24.1	1,064
1995	916	71.6	364	28.4	1,280

Source: Bureau of Health Policy and Plan, 1997, Health in Thailand 1995-1996, p. 114.

Although the absolute increase in the number of public hospitals has been considerably greater than that for the private sector (379 to 154 between 1981 and 1995) the proportions of public and private hospitals in total hospitals has remained constant. However, the growth in the number of beds of public and private sectors shows differences. During 1981-1995, the total number of hospital beds increased by 63.6 percent (from 72,368 to 118,417 beds). In 1981, beds in private hospitals were only 10.4 percent of the total. The proportion of private hospitals beds in total hospital beds rapidly increased in the early 1990s from 12.6 percent in 1991 to 23.1 percent in 1995 (see Table 3.11).

Table 3.11 Number and Proportion of Public and Private Hospital Beds in Thailand, 1981, 1991 and 1995

Year	Beds in public hospitals		Beds in private hospitals		Total Beds
	Number	Percentage	Number	Percentage	
1981	64,868	89.6	7,500	10.4	72,368
1991	81,975	87.4	11,877	12.6	93,852
1995	91,151	76.9	27,266	23.1	118,417

Source: Public Health Statistic Office, Bureau of Health Policy and Plan, 1997.

Given such growth it follows that there have been increasing numbers of health personnel working in the private sector (Table 3.12). For example, physicians working in the private sector increased by 81 percent, from 274 to 3,364, between 1971 and 1995. Nurses in the private sector also increased by 128 percent, from 3,366 to 7,679, between 1990 and 1995 (Health Statistics Divisions, 1996). While the number of health personnel has greatly increased in the public sector the rate of increase in the private sector has been more rapid. For example, numbers of doctors in the private sector increased by 12-fold between 1990 and 1995 whereas there was only a 2.8-fold increase in the public sector over the same period. Nurses in the private sector also increased by 12-fold as compared to only 5.3-fold in the public sector during the same period.

Table 3.12 Number of Health Personnel in the Government and Private Sectors, 1971, 1981, 1991 and 1995

Categories of health personnel	1971	1981	1991	1995
Public sector				
Doctor	3,811	6,200	10,496	10,817
Dentist	511	931	1,864	2,179
Pharmacist	678	1,256	2,741	3,978
Nurse	8,723	17,101	36,785	46,583
Private sector				
Doctor	274	731	2,307	3,364
Dentist	20	98	544	741
Pharmacist	899	1,424	1,592	1,889
Nurse	637	2,498	3,900	7,679

Source: Wibulpolprasert, 2000, *Thailand Health Profile 1997-1998*, p. 151, 153, 157 and 161.

While the public sector continues to provide out-patients services for the majority of the population there has been more rapid growth in the numbers seeking these services from private sector. Out-patients seeking services in the private sector rose from 5.5 million in 1989 to 16.7 million in 1995 an increase of 204 percent, while the figure for the public sector growth was only 75 percent. The private sector accounted for 2 percent of out-patients in 1989 but rising to 19 percent in 1995 (Table 3.13).

Table 3.13 Number of Out-patients at Public and Private Health Facilities, 1989-1995

Health facility	Out-patients (in millions)		
	1989	1993	1995
Public facilities	39.9	56.7	69.7
Private facilities	5.5	11.3	16.7

Source: Bureau of Health Policy and Plan, 1997, *Health in Thailand 1995-1996*, p. 115.

There are five reasons for the rapid increase in demand for private health services. Firstly, households have more income and better education which lead to increasing demand for services from health facilities. Secondly, buying drugs with no professional consultation for self-care is decreasing. Thirdly, the rate of expansion of public sector health services is lower than would be required to cope with the increasing demand for health services. Fourthly, there has been an increasing demand for specialised services. Fifthly, health insurance schemes have grown and have options for treatment in the private sector (Tangchroensathien, 1994; Chaichana, 1997).

Government policies have directly supported the private health sector through investment promotion and tax exemption. There are other pro-private policies both in finance and service delivery. In term of finance, increases in the government health budget have been below the demand. Thus, the Thai government has been shifting the burden of health spending onto households which now account for 78 percent of total health expenditure (Pannarunothai and Mills, 1997). By the early 1990s, Thai households had the second highest health expenditure in the region after Hong Kong

with 80 percent (World Bank, 1994). The government policy of restricting the numbers of position for public servants in health is also indicative of attempts to prevent expansion. This has been in line with overall attempts to limit the government's budget.

During the economic boom, many new private hospitals were built both in Bangkok and other cities. This contributed to the mix of public and private health care in Thailand shifting rapidly in an uncontrolled and unplanned manner (Nittayarampong and Tangcharoensathien, 1994). In 1997, there were 491 private hospitals nationwide which had the total of 38,319 beds. Bangkok accounted for 29.1 percent of the total private hospitals (143 private hospitals). The central region had 33.4 percent (164 private hospitals) while the Northeast had 70 private hospitals (14.3 percent). From the total of 38,319 private hospital beds, Bangkok accounted for 15,505 beds (40.5 percent), followed by the Central region, 11,044 beds (28.9 percent) and the Northeast, 5,268 beds (13.7 percent) (Table 3.14). These private hospital beds were 300 percent over requirements (Wibulpolprasert, 1998). After the economic crisis in July 1997, private hospitals were heavily affected by economic down-turn and by specific government expenditure controls such as civil servants being banned from obtaining reimbursement for their health expenses for services in private hospitals. It was even forecast that 35 percent of the private hospitals would close down within 2-3 years (Wibulpolprasert, 1998). In 1997, only 3 out of 13 private hospitals which were registered on the Thai stock market still made profits from health services (*Prachachatthurakit*, June 15, 1998). In such conditions, private hospitals have to look for increased operational efficiency to survive.

It is accepted that the private sector has been the principal provider of modern health care services in urban Thailand. According to theory, private providers offer consumers more choice and provoke competition, thus raising standards of patient care, particularly in aspects such as waiting time and non-clinical services in both public and private sectors (Bennett and Tangcharoensathien, 1994). This has led to many public hospitals applying private sector management methods to improve their service efficiency and cost effectiveness. This has been particularly evident in contracting-out and in the sale and leasing of facilities and equipment. In relation to contracting out, many hospitals hire

private contractors to run both clinical and non-clinical services (Bennett and Mills, 1998).

Table 3.14 Distribution of Private Hospitals in Thailand, 1997

Region	Number of private hospitals	Percentage	Numbers of Beds	Percentage
Bangkok	143	29.1	15,505	40.5
Central	164	33.4	11,044	28.8
North	56	11.4	3,696	9.6
Northeast	70	14.3	5,268	13.7
South	58	11.8	2,806	7.3
Total	491	100	38,319	100

Source: Wibulpolprasert et al, 1998, *The Economic Crisis and Responses by the Health Sector in Thailand in 1997-1998*, p. 12.

Non-clinical services are catering, laundry, linen, cleaning, maintenance and printing. For example, Banphaeo Hospital, Samut Sakorn province, has contracted out catering and lift maintenance to the private sector. The hospital has obtained better service at a lower price (Artavatkoorn, 1995). Some public hospitals have contracted private sector operators to provide clinical services involving expensive equipment's such as CT scanners and extracorporeal shock wave lithotripters. For example, Ramathibodee Hospital, a public university hospital in Bangkok has contracted a private company to provide CT scanning services. This private CT scanning service in Ramathibodee Hospital has higher usage rates than public hospitals of the Ministry of Public Health (Tangcharoensathien et al., 1994).

Contracting out for sophisticated technology that is used in some laboratory tests, special diagnostic services, and radiation therapy will be necessary in the near future. Even if this equipment is available in the public sector, there will not be enough staff to run it. With regard to sale and leasing, many hospitals in the Northeast of Thailand have

faced the problem of surgical doctors moving to the private sector. The departure of specialist expertise means that some expensive equipment in public hospitals, such as extracorporeal shock wave lithotripters, is not used. The solution is to sell or lease the equipment to private hospitals. Operation rooms, conference rooms, some audiovisual equipment and other equipment can also be leased. It promotes more efficient use of resources by providing an improved return on capital investment (Tangcharoensathien, 1994).

There is much debate concerning the quality of services provided by both public and private sectors. In the last five to six years there has been much public comment from the media, community and political leaders concerning the quality of health care services. There is considerable dissatisfaction. In the parliament on 23 November 1994, one member complained that 'the services in public hospitals are like butcheries and private hospitals are bloody expensive' (Supawongse, 1994: 39). There have also been headlines in many newspapers and stories in other media concerning problems of hospital services such as: quality of service (*Thairath Daily*, 28 May 1993; *Matichon*, 12 November 1993); service charges (*Daily News*, 27 February 1992; *Chalardsue Magazine*, June 1994); negligence towards patients and refusal to provide services (*Thairath Daily*, 12 June 1992; *Daily News*, 24 December 1992; *Thairath Daily*, 5 June 1993). Furthermore, there are also concerns about inappropriate information dissemination such as illegal advertisement of hospitals and services in the media. The Bureau of Public Health Policy and Plan (1997: 154) claimed that this problem was due to the lack of systems for quality inspection and assurance and for service accreditation. The provisions of the Health Facilities Act are outdated. In 1993, there were 335 complaints from patients seeking service in public hospitals and 153 complaints from those in private hospitals (see Table 3.15). The issues most complained about in public hospitals were personnel's manner or impoliteness, (68.7 percent), slow service or long waiting time (44.8 percent) and inconvenience (10.9 percent) (Bennett and Tangchroensthien, 1994). Staff manner and slow service were also the most common complaints (40.5 percent) in private hospitals. Other frequent in private hospitals were inadequate explanation and poor skill of staff (26.1 percent each), and expensive fees (18.9 percent). About 7 percent of complaints for public hospitals were discrimination such as against the poor.

Table 3.15 Dissatisfaction of Clients at Public and Private Hospitals, 1993

Issues causing dissatisfaction	Dissatisfied cases			
	Public hospital		Private hospital	
	No.	%	No	%
Manner	230	68.7	62	40.5
Price	7	2.1	29	18.9
Rapidity	150	44.8	52	34.0
Skills	23	6.9	40	26.1
Convenience	35	10.4	9	5.9
Explanation	23	6.9	40	26.1
Equipment	3	0.9	1	0.7
Morality	4	1.2	12	7.8
Discrimination	23	6.9	1	0.6
Management	56	16.7	25	16.3
Others	24	7.2	17	11.1

Source: Bennett and Tangchroensthien, 1994. Active Consumer or Passive Patient: The Hospital User in Bangkok. p. 35.

The 1994 study of Dr. Paibol Suriyawongpaisal found that 136 out of 198 clients (68.7 percent) were not satisfied with services in private hospitals. Price was the leading cause of dissatisfaction indicating that patients believed they were not getting value for money (Table 3.16).

Table 3.16 Causes of Dissatisfaction in Private Hospitals.

Issues raising dissatisfaction	Percent of Complaints
Price	68.7
Rapidity	68.4
Skills	16.7
Convenience	16.2
Inadequate examination	12.6
Discrimination	11.1
Congestion	10.6

Source: Supawongse, 1994, *Quality of Medical Services and Medical Ethics*, p. 304.

A study of 'quality of hospitals from the patients' perspective' conducted in 9 hospitals in Bangkok indicated the best quality hospital were private not-for-profit hospitals followed by private for profit and public hospitals respectively (Tangcharoensathien *et al.*, 1996).

Conclusion

Thailand's economic growth over the past two decades has had great impact on Thai society. It has brought higher incomes, better education, better living conditions and advanced technologies. The health status of Thai people has been improving with longer life expectancy at birth, lower infant mortality rate and lower maternal mortality rates. However, economic development has changed people's lifestyles resulting in an epidemiological transition towards growth in non-communicable illnesses. Increased pollution has led to the increased incidence of some diseases while the new communicable disease of AIDS has become a prominent problem.

In the period of rapid economic growth, there was a changing demand for health care with much of the expenditure coming out of the household pocket. With better education and higher incomes, the demand for private sector health care provision grew as people

demanded better and more specialised services. The government also promoted policies to increase the private sector role's in providing health care through investment promotion and tax exemption. These factors have helped the private health sector to grow fast to become a major provider of health care to urban dwellers. However, this public and private mix in health care provision has not been well planned or well regulated. Proof of this became evidence after the economic crisis of 1997. Most private hospitals became unprofitable and some were forced to close because of financial difficulty.

There is great concern in Thailand about the quality, equity and efficiency of health care. Some believe that, through competition, the private health sector could improve the delivery of services to the people. It also could decrease the burden of too many people seeking health care in the public sector which is often characterised as long queues waiting for service. The issue of better quality but over-charging and some ethical complaints concerning services in the private sector are being heard. The other major concern is equity. The poor cannot pay for services in the private health sector thus leading to the private health sector being viewed as services for the rich while the public health sector is for the poor. This study aims to compare public and private health care provision in the poorest region of Thailand to discover whether such perceptions of performance and equity are valid.

Chapter Four

Health Care in the Northeast of Thailand

In this chapter we move the focus of our attention from the national to the subnational level and look in detail at health care in the Northeast of Thailand. The chapter begins with a brief geographical and socioeconomic background, before dealing with the core issues of health status and the health care system. The involvement of private health care in this region is clearly elaborated.

Geography, Demography and Socioeconomic Conditions

The Northeast of Thailand, or the Korat plateau, is a low altitude plateau sloping down to the Mekong River. The region is also known as “Isan”. It covers an area of approximately 168,854.3 square kilometres or about one third of the country. The Northeast borders on two neighbouring countries, Lao PDR in the north and east and Cambodia in the east. The region is divided into two parts, the Northern and the Southern Isan, and consists of 19 provinces. In 1997, there were 20 million people living in this region or about one third of the country’s population (Institute of Population Studies, 1998). The average family size was 4.3 people and the population density was 125 people per square kilometre, lower than national average. Provinces with the largest populations are Nakorn Ratchasima, Khon Kaen, Udorn Thani and Ubon Ratchathani respectively. In 1997, Nakorn Ratchasima had the region’s highest provincial population with 2,510,839 people, whereas Mukdaharn had the region’s lowest population with only 326,188 people (Northeastern Development Centre, 1999). The population was overwhelmingly rural with only 6.3 percent classified as living in urban centres.

In 1996, more than 60 percent of people in the Northeast were in the working age group (15-59 years old) while 30.7 percent were in the dependency group (0-14 years old) (see Table 4.1). Persons 60 years and over accounted for 7.2 percent of the population in the Northeast (MoPH, 1997). The population structure of Northeast was similar to the national average.

Table 4.1 Population Structure of Northeast Thailand, 1996

Age group	Numbers	Percent
0-14	6,376,297	30.7
15-59	12,897,983	62.1
≥60	1,495,418	7.2
Total	20,769,698	100

Source: Ministry of Public Health, 1997, *Health Statistics*.

The Northeast economy still relies on the agricultural sector which accounted for 19.9 percent of the region's gross domestic product in 1996. Retail and wholesale merchandising (18.9 percent), services (15.9 percent), industry (12.2 percent) and construction (11.1 percent) are other leading sectors in the region's economy. The economic growth rate of the region from 1991-1996 was 7.2 percent which was lower than the annual national average. Its share of national GDP decreased, from 25.4 percent in 1992 to 19.9 percent in 1996 (Northeastern Development Centre, 1999). The major crops are rice, corn and cassava (Tangcharoen, 1994; Northeastern Development Centre, 1999). For the industrial sector, in 1997 there were 45,149 factories in the Northeast representing a total of 122,477.2 million Baht in investment. There were 236,545 workers in these factories. The region's Gross Domestic Product in 1996 was 543,478.9 million Baht.

The Northeast is a relatively poor region. The average annual income of the Northeast was 26,635 Baht/person which was about one third of the national figure (Northeastern Development Centre, 1999). Many of the Northeasterners migrate to work in other regions and overseas.

Health Status of the People in the Northeast

Birth rates and death rates in Northeast Thailand have been decreasing over the past decade. The birth rate decreased from 24.87 births per 100,000 population in 1985-1986 to 19.96 births per 100,000 population in 1995-1996 as a result of successful family planning programmes (see Table 4.2). During the same period, the death rate also decreased from 6.82 deaths per 100,000 population to 6.12 per 100,000 population. The overall effect of the reduction of birth and death rates was to lower the natural population growth rate. The natural growth rate in the Northeast decreased from 1.44 in 1985-1986 to 1.38 in 1995-1996. In 1995-96, the growth rate in the Northeast were the second highest in the country after the South, the death rate were the third highest slightly lower than those of the South and North.

Table 4.2 Birth Rate, Death Rate and Natural Growth Rate by Region, 1985-1986 and 1995-1996

Region	1985-1986			1995-1996		
	Birth rate	Death rate	Natural growth rate	Birth rate	Death rate	Natural growth rate
Bangkok	18.92	3.42	1.51	14.24	3.92	1.03
Central*	22.43	5.76	1.67	15.61	5.78	0.98
North	21.60	7.23	1.44	14.83	6.97	0.79
Northeast	24.87	6.82	1.81	19.96	6.12	1.38
South	31.17	7.03	2.41	24.00	6.69	1.73
Thailand	23.87	6.44	1.74	17.73	6.02	1.19

Source: Modified from National Statistics Office, 1997, *Population Change Survey*.

Notes: Birth rate/1,000 population

Death rate/1,000 population

Natural growth rate/100 population

* excluding Bangkok

The health status of the people in the Northeast has been improving over the past decade. The infant mortality rate (IMR) was very high in 1985-1986 (48.0 infant deaths per 1,000 live births). The ratio decreased to only 29.4 infant death per 1,000 live births in 1995-1996. However, when compared to the national average the IMR figures for the Northeast were still the second highest in the country after the North (see Table 4.3).

Table 4.3 Infant Mortality Rate (IMR) by Regions, 1985-1986, 1991, and 1995-1996

Region	1985-1986	1991	1995-1996
Bangkok	27.4	22.5	18.9
Central*	30.0	26.2	19.4
North	48.0	42.4	30.8
Northeast	45.1	39.0	29.4
South	36.7	31.1	25.7
Thailand	40.7	34.5	26.1

Source: Modified from: National Statistics Office, 1997, *Population Change Survey*.

Note: * excluding Bangkok

People in the Northeast are in transition not only in terms of their health status but also in changing patterns of diseases. The major causes of morbidity are infectious diseases but there is a growing prevalence of non-communicable diseases (see Table 4.4). The leading cause of morbidity in the Northeast was diseases of the respiratory system (293 people/1,000 out-patients in health service units), followed by the diseases of the digestive system (192 people/1,000 out-patients in health service units). The problem of infectious and parasitic diseases, and mental and behavioural disorders were greater in the Northeast than the national average.

Table 4.4 Ten Leading Causes of Morbidity of the Northeast Region: Number and Rate per 1,000 Out-patients in Health Service Units, 1995

Cause of morbidity	Northeast region		Whole country	
	Number	Rate	Number	Rate
1. Diseases of respiratory system	6,046,694	293.49	16,883,544	314.40
2. Diseases of digestive system	3,958,406	192.13	8,933,315	166.35
3. Certain infectious and parasitic diseases	1,910,511	92.73	4,234,450	78.85
4. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	1,756,463	85.25	5,523,597	102.86
5. Other external causes of morbidity and mortality	1,648,881	80.03	4,297,181	79.69
6. Diseases of musculoskeletal system and connective tissues	1,625,520	78.90	4,547,616	84.64
7. Diseases of skin and subcutaneous tissue	1,250,409	60.69	3,703,585	68.97
8. Endocrine, nutritional and immune mechanism	1,105,390	3.65	2,405,139	44.79
9. Mental and behavioural disorders	693,979	3.68	1,513,926	28.19
10. Diseases of eyes and adnexa	555,650	26.97	1,552,421	28.91

Source: Health Information Division, 1996, *Health Statistics*.

Even though the number of people suffering from non-communicable disease has not reached the top ten causes of morbidity, the incidence of non-communicable diseases has been increasing in the Northeast. Heart disease was the leading cause of death of the people in the Northeast both in 1992 and 1996. Death caused by accident was the second highest cause of death. Communicable diseases such as pneumonia, tuberculosis and

hemorrhagic fever were still among the leading causes of death in the region (see Table 4.5).

Table 4.5 Causes of Death in the Northeast: Number and Rates per 100,000 Population, 1992 and 1996

Causes	1992		1996	
	Numbers	Rate	Numbers	Rate
Heart Disease	8,579	42.8	14,343	69.1
Accident and Accidental poisoning	5,940	29.6	12,918	62.2
Chronic Liver Disease and Cirrhosis	3,371	16.8	3,406	16.4
Motor Vehicle Accident	1,565	7.8	5,144	24.8
Pneumonia	1,233	6.1	1,820	8.8
Tuberculosis	1,382	6.9	1,496	7.2
Tuberculosis of Lung	1,368	6.8	908	4.4
Homicide	627	3.1	632	3.0
Diarrhoea and gastroenteritis	537	2.7	453	2.2
Hemorrhagic fever	109	0.5	199	1.0

Source: Ministry of Public Health, 1993 and 1997, *Public Health Statistics 1992 and 1996*.

The Northeast has other health problems. The incidence of liver fluke has been increasing. It was only 22.9 percent in 1991 but increased to 29.7 percent in 1996. Liver fluke infection has a correlation with Cholangiocarcinoma and liver cancer. Even though the prevalence of protein calorie malnutrition among children has been decreasing, the Northeast still had the highest rate of this type of malnutrition. In 1990, 25 percent of children in the Northeast suffered from protein calorie malnutrition. The rate decreased to 11.4 percent in 1997, whereas the national average was 7.1 percent (see Table 4.6).

The Northeast had the highest rate of iron deficiency among children aged 6-14 years. There were 15.6 percent of children in the Northeast with iron deficiency in 1996 as compared to 20.2 percent in 1993. The Northeast is far from the coast resulting in many people not having access to seafoods which prevent iodine deficiency. Iodine is essential for human productivity and intelligence. In the period of 1996-1998, the prevalence of iodine deficiency in the Northeast was the second highest in the country after the North. In 1997, the prevalence of iodine deficiency in the Northeast was 3.5 percent while the national average was 2.6 percent.

Table 4.6 Percentage of Population Affected by Selected Diseases in the Northeast of Thailand, 1990, 1993, 1996, 1997 and 1998

Disease	Northeast					National average		
	1990	1993	1996	1997	1998	1996	1997	1998
Liver fluke	22.9	*	29.7	*	*	11.8	*	*
Protein calorie malnutrition	25.0	*	*	11.4	*	*	9.4	*
Iron deficiency (Children 6-14 years)	*	20.2	15.6	*	*	13.8	*	*
Goiter	*	*	5.2	4.4	3.5	4.3	3.3	2.6

Source: Division of Epidemiology, 1999, *Disease Surveillance 1990-1998*.

Note: * = no data available

The Health Care System in the Northeast of Thailand

Public Health Sector in the Northeast of Thailand

As in other parts of Thailand, there were three levels of public health care facilities in the Northeast: primary, secondary and tertiary. In 1997, the primary level was composed of more than 3,300 health centres. At secondary level there were 255 community hospitals serving the people at the district level. There was a general hospital in 13 provinces of the Northeast while there were six regional hospitals in the other provinces. These

regional hospitals were in the Northeast's six big provinces in term of population: Khon Kaen, Udon Thani, Nakorn Ratchasima, Ubon Ratchathani, Surin and Burirum (see Table 4.7).

Table 4. 7 Public Health Care Facilities in the Northeast, 1997

Public health facilities	Northeast region	Nationwide
Regional hospital	6	25
General hospital	13	67
Total of community hospitals	255	713
120 beds community hospital	4	11
90 beds community hospital	21	52
60 beds community hospital	53	127
30 beds community hospital	153	429
10 beds community hospital	24	94
Extended hospital	-	3
Big health centre	592	1,572
Health centre	>2,773	7,900
Community primary health care centre	24	413

Source: MoPH, Provincial Hospital Division, 1998, *Health Resources*.

There are other specialised public sector hospitals, clinics and health facilities, some of which are not under the Ministry of Public Health (see Table 4.8). There is a big university hospital, Srinakarind Hospital at Khon Kaen University with 781 beds capacity, serving the whole region and also acting as a training hospital for all types of health personnel. Two maternal and child health hospitals are in Phol and Maung districts of Khon Kaen. There are three psychiatric hospitals and three communicable disease hospitals in Khon Kaen, Nakorn Ratchasima and Ubon Ratchathani. The communicable disease hospital in Khon Kaen was previously for leprosy but is now focusing on AIDS patients. There are 10 military hospitals under the Ministry of Defence. All these health

facilities provide health services to the people of the Northeast as well as to people from the neighbouring countries of Lao PDR and Cambodia.

Table 4.8 Special Health Facilities in the Northeast, 1995

Special Hospitals	Number	Beds	Ministry
Malaria clinic - Khon Kaen	1	-	Public Health
Communicable disease hospital (Leprosy) - Nakorn Ratchasima - Khon Kaen - Ubon Ratchatani	1 2 1	1,200	Public Health
Maternal and child health hospital - Khon Kaen	2	260	Public Health
Tuberculosis (Lung disease) - Nakorn Ratchasima - Khon Kaen - Ubon Ratchatani	1 1 1		Public Health
Venereal disease - Nakorn Ratchasima - Khon Kaen	1 1	- -	Public Health
Psychiatric hospital - Nakorn Ratchasima - Khon Kaen - Ubon Ratchatani	1 1 1	300 372 750	Public Health
Military Hospital	10	1,767	Defence
University Hospital	1	781	University Affairs

Sources: Bureau of Health Policy and Plan, 1996, Report on Health Resources.

Over the past two decades the numbers of hospital beds, doctors, nurses, dentists and pharmacists in the public sector of the Northeast have been increasing (see Table 4.9). Despite these improvements the figures for the Northeast remain below the national averages. The number of hospital beds in the Northeast has increased from 10,776 beds in 1979 to 23,541 beds in 1995. The ratio of population per hospital bed improved from 1,511 people per bed to 875 people per bed over the same period. In 1979, there were only 633 doctors working in the region but by 1995 the numbers had increased to 1,848. Professional nurses comprise the highest number of health personnel serving the northeastern people. The population per one professional nurse decreased from 9,492 in 1979 to 2,246 people per one nurse in 1995. While the total number of dentists and pharmacists in the region also increased, the ratio of population per dentist and pharmacist remained very high. The ratio of population per dentist in 1995 was 44,062 whereas the population per one pharmacist was 33,010. These and the other ratios cited above indicated that health care facilities and personnel in the Northeast provided inferior coverage when compared to the national averages.

Table 4.9 Hospital Beds and Selected Health Personnel for Thailand and the Northeast, 1979, 1985 and 1995

Health facilities/ Personnel	Northeast 1979	Northeast 1985	Northeast 1995	National figure in 1995
Beds	10,776 (1,511)	15,294 (1,174)	23,541 (875)	118,417 (501)
Doctor	633 (25,716)	1,134 (15,709)	1,884 (10,805)	14,181 (4,180)
Professional nurse	1,715 (9,492)	3,420 (5,290)	9,065 (2,246)	54,262 (1,092)
Dentist	58 (280,655)	86 (208,767)	462 (44,062)	2,920 (20,300)
Pharmacist	72 (226,083)	113 (154,788)	613 (33,010)	5,867 (10,104)

Source: Bureau of Health Policy and Plan, 1997, *Health in Thailand*, p. 92, 97, 99, 101, 105 and 113.

Note: figures in parentheses indicate either the population per hospital bed or health personnel to population.

The ratios of health personnel in the public sector to population in the Northeast region are the lowest among the regions (see Table 4.10). For example in 1995, the population to doctor ratio in the Northeast was 10,805 while in the North, which had the next worse ratio, the figure was 5,824. In Bangkok there were 999 people per doctor. Dentists were in short supply in all regions but especially the Northeast. In 1995, a dentist in the Northeast accounted for 44,062 people, 34,090 people in the North and 5,180 people in Bangkok. For professional nurses, the national average population per professional nurse was 1,092. The ratio in the Northeast was 2,246 people per professional nurse, giving the Northeast the highest number of people per professional nurse among all the regions.

Table 4.10 Distribution and Ratios of Health Personnel in the Public Sector to Population by Regions, 1995.

Region	Physician	Dentist	Pharmacist	Professional Nurse	Technical Nurse
Bangkok	5,582 (999)	1,077 (5,180)	2,446 (2,280)	16,089 (347)	2,282 (2445)
Central*	3,309 (4,042)	735 (18,195)	1,728 (7,835)	13,240 (1,010)	9,912 (1,349)
North	2,037 (5,824)	348 (34,090)	606 (19,644)	9,370 (1,266)	6,356 (1,866)
Northeast	1,884 (10,805)	462 (44,062)	613 (33,010)	9,065 (2,246)	7,787 (2,614)
South	1,369 (5,510)	298 (25,314)	474 (17,569)	6,498 (1,161)	4,943 (1,526)
Total	14,181 (4,180)	2,920 (20,300)	5,867 (10,104)	54,262 (1,092)	31,280 (1,895)

Source: Health Information Division, 1997, *Bureau of Health Policy and Planning*.

Note: * excludes Bangkok. The figures in parentheses are the health personnel to population ratios

The major health care provider in the Northeast is the Ministry of Public Health. In 1997, The Ministry had allocated 21,914 beds, 2,030 doctors and 9,420 nurses to serve the 21,092,841 people of the region. There were 963 people per hospital bed, 10,390 people per doctor and 2,239 people per nurse. However there were inequities in the distribution of health facilities and personnel in the region. Mukdahan had the best population per hospital bed ratio (627:1), followed by Udorn Thani (788:1) and Nakorn Ratchsema (816:1). Amnat Charoen had the worst population per hospital bed ratio at 1,489 people, followed by Sri Sa Ket (1,236:1) and Chaiyaphum (1,201:1). Khon Kaen had 511 doctors, the highest number in the region and also the best population per doctor ratio (3,379 people/doctor), followed by Nakorn Ratchasima (7,517 people/doctor) and Udorn Thani (8,062 people/doctor). These three provinces also had the highest per capita income of the region. In 1996, Nakorn Ratchasima had the highest per capita income at 39,519 Baht, followed by Khon Kaen (39,139 Baht) and Udorn Thani (29,527 Baht). Kalasin had the lowest doctor/population ratio (23,201) followed by Loei (22,531) and Sri Sa Ket (21,553). Khon Kaen also had the best population per nurse ratio (1,252:1) while Nong Bua Lum Phu had the worst figure with 4,227 people per nurse.

Although there are pronounced intra-regional differences in the distribution of health personnel and facilities, overall there are still not enough hospital beds and health personnel to provide the Northeast people with the levels of health services found in other regions of Thailand (see Table 4.11). People have to wait for a long time, in some regional hospitals more than a day, to get services. They have to queue very early in the morning, sometimes as early as 5 am. It always takes at least half a day for one out-patient visit to a public hospital. In 1997, there was not enough capacity in the public sector health facilities in the provinces of the Northeast to serve the people to the

Table 4.11 Distribution of Health Facilities and Health Personnel of the Ministry of Public Health in the Northeast, 1996-1997.

Province	Health Facilities	Beds	Doctors	Nurses
Nakorn Ratchasima	379	3,076 (816)	334 (7,517)	1,352 (1,857)
Chaiyaphum	178	929 (1,201)	59 (18,907)	433 (2,576)
Buri Ram	236	1,342 (1,114)	105 (14,237)	541 (2,763)
Surin	217	1,496 (914)	98 (13,956)	374 (3,657)
Khon Kaen	264	1,828 (945)	511 (3,379)	1,379 (1,252)
Maha Sarakham	182	807 (1,150)	50 (18,555)	385 (2,410)
Kalasin	168	1,058 (921)	42 (23,201)	261 (3,734)
Roi Et	246	1,253 (1,046)	80 (16,376)	536 (2,444)
Udon Thani	216	1,894 (788)	185 (8,062)	652 (2,288)
Nong Bua Lumphu	85	410 (1,186)	26 (18,698)	115 (4,227)
Nong Kai	330	774 (1,148)	60 (14,812)	375 (2,370)
Loei	134	654 (965)	28 (22,531)	170 (3,711)
Nakorn Phanom	159	689 (1,022)	49 (14,366)	340 (2,070)

Province	Health Facilities	Beds	Doctors	Nurses
Mukdahan	85	520 (627)	32 (10,193)	243 (1,342)
Sakon Nakhon	177	1,234 (873)	80 (13,465)	490 (2,198)
Ubon Ratchathani	338	1,917 (903)	156 (11,095)	876 (1,976)
Amnat Charoen	83	242 (1,489)	21 (17,159)	101 (3,568)
Sri Sa Ket	273	1,151 (1,236)	66 (21,553)	487 (2,921)
Yasothon	121	640 (854)	48 (11,385)	310 (1,763)
Total	3,679 (5,733)	21,914 (963)	2,030 (10,390)	9,420 (2,239)

Source: Northeast Development Centre, 1998, NESDB, *Northeast Region's Socioeconomic Data*, p. 42

Note: Numbers in parentheses are ratios, showing number of people per hospital bed, doctor and nurse.

Health facilities includes hospitals and health centres. The data for beds and personnel include only hospitals.

standard found in other regions. Overcrowded facilities were common, especially at the provincial and regional hospitals.

Private Health Sector in the Northeast of Thailand

Although the Northeast has continued to lag behind other regions in the provision of health facilities, there has been a considerable increase in the number of hospital beds in the Northeast over the last decade. This has been especially evident in the growth of

private sector health provision. The number of private hospitals increased from 29 to 54 and the numbers of their beds from 1,139 beds to over 4,000 between 1991 and 1998. The rate of increase of private hospital beds was 254 percent during this period (see Table 4.12). The southern part of the Northeast which had 13 private hospitals in 1991 had the highest rate of increase in private hospital beds at 347 percent between 1991 and 1998 (Faculty of Medicine, 1994; Division of Regional Hospitals, 1999)

Table 4.12 Distribution and Capacity of Private Hospitals in the Northeast, 1991 and 1998

Zone	1991		1998		Increased (%) Beds
	Hospitals	Beds	Hospitals	Beds	
Zone 5	9	569	17	1,515	166
Zone 6	13	350	24	1,530	337
Zone 7	7	220	13	983	347
Total	29	1,139	54	4,028	254

Sources: Faculty of Medicine, Khon Kaen University, 1994, *Health Resources in the Northeast*.

Division of Regional Hospitals, 1999, *Report on Health Resources*.

In 1991, private hospitals were typically small in the Northeast. No private hospital had more than 100 beds (Health Statistics Division, 1992). The next 5 years were the characterised by economic boom in Thailand, and many investment opportunities were available all over the country. One of these opportunities was private health provision. Furthermore, the Northeast is in the investment zone 3, where the Thai Government gave special incentives, such as income tax exemption for 5 years and a waiver on import duty on medical equipment. In the early 1990s, low interest loans could be obtained from overseas and used for investment in private hospital business, an activity considered to be in the same category as hotels by the Board of Investment. Between 1991 and 1996, more than 40 private hospitals were built in the Northeast and many had more than 100 beds capacity. In 1998, there were 43 private hospitals which had 199 beds or under

capacity, 10 private hospitals with 101-250 beds capacity and even a large (>250 beds) private hospital (see Table 4.13) (Division of Regional Hospitals, 1999).

Table 4.13 Distribution and Capacity of Private Hospitals in the Northeast of Thailand, 1998

Zone	<11 Beds	11-30 Beds	31-50 Beds	51-100 Beds	101-250 Beds	>250 Beds	Total
Zone 5	1	6	2	1	6	1	17
Zone 6	3	6	5	8	2	-	24
Zone 7	-	1	4	6	2	-	13
Total	4	13	11	15	10	1	54

Source: Bureau of Health Policy and Plan, 1999, *Report on Health Resources Survey*.

The private hospital services were well utilized by people in the Northeast at rates slightly higher than the national average. In 1997, the bed occupancy rate of private hospitals in the Northeast was 58.6 percent whereas the national average was 58.1 percent. There were 240,371 in-patients in private hospitals in the Northeast and the average hospital stay was 2 days (see Table 4.14), (National Bureau of Statistics, 1998).

Table 4.14 Private Hospitals' Bed Occupancy Rate in the Northeast of Thailand, 1997

Region	In-patients (numbers)	Admission day of in- patient (numbers)	Number of beds	Average hospital stay (days)	Bed occupancy rate (%)
Northeast	240,371	562,561	2,632	2	58.6
Thailand	2,328,376	6,148,619	28,971	3	58.1

Source: National Bureau of Statistics, 1998, *Health Statistics*.

There was no information on the Northeast concerning the types of contract of health personnel working in the private hospitals. However, from interviews and personal observation it can be surmised that the national figures generally reflect the picture in the Northeast. In 1996, throughout Thailand (Table 4.15), there were 111,928 health personnel working in private hospitals, 74.9 percent full-time and 25.2 percent part-time. It is interesting that very few of the doctors (27.4 percent) and dentists (25.5 percent) were full-time suggesting they were employed in public and other private hospitals. Less than 50 percent of nurses worked full-time. Almost all of the nurse aides (97.1 percent) were full time. A nurse aide is normally a person who has finished secondary school and is then trained by a hospital for 6 months to perform some basic medical and nursing care. The group of personnel with the highest full-time profile was supporting service staff (97.8 percent) followed by administrative staff (93.4 percent) and health services staff (77.3 percent).

Table 4.15 Number and Percentage of Private Hospital Health Personnel and Type of Contract in Thailand, 1996

Health personnel	Total		Full-time		Part-time	
	No.	Percent	No.	Percent	No.	Percent
Administrative level	7,173	100	6,697	93.4	476	6.6
- Director, deputy director	1,394	100	1,115	86.2	179	13.8
- Head of (department, division, ward), supervisor	5,879	100	5,582	94.9	297	5.1
Medical care staff	64,737	100	40,336	62.3	24,401	100
- Doctor	13,181	100	3,606	27.4	9,575	72.6
- Dentist	1,331	100	340	25.5	991	74.5
- Nurse	21,851	100	9,863	45.1	11,988	54.9
- Professional	18,555	100	9,150	49.3	9,405	50.7
- Technical	3,296	100	713	21.6	2,583	78.4

Health personnel	Total		Full-time		Part-time	
	No.	Percent	No.	Percent	No.	Percent
- Practical nurse	8,657	100	7,697	88.9	960	11.1
- Nurse aide	15,912	100	15,453	97.1	459	2.9
- Midwife	671	100	514	76.6	157	23.4
- Others	3,134	100	2,863	91.4	271	8.6
Health service staff	11,180	100	8,639	77.3	2,541	22.7
- Radio therapy technician	1,788	100	1,300	72.7	488	27.3
- Physiotherapist	704	100	437	62.1	267	37.9
- Laboratory technician	1,428	100	886	62.0	542	38.0
- Pharmacist and assistant	3,302	100	2,191	88.4	1,111	33.6
- Nutritionist	721	100	704	97.8	16	2.2
- Other	3,237	100	3,120	65.8	117	3.6
Support service staff	28,838	100	28,190	97.8	648	2.2
Total	111,928	100	83,862	74.9	28,066	25.1

Source: National Bureau of Statistics, 1997, Health Statistics.

The proportion of health personnel in the private sector in the Northeast is similar to the national figures. The ratio of private hospital beds and particular types of health personnel to the people in the Northeast are inferior to national figures. The number of in-patients per full-time doctor per day in the private hospitals in the Northeast was four while the national figure was two patients per doctor per day (see Table 4.16). The out-patients per full time doctor was also low at 29 patients per doctor per day. The beds per professional nurse ratio was nine whereas beds per technical nurse was 60. When compared with the public sector figures it seems that the private hospitals in the Northeast used more qualified nurses. Furthermore, the in-patients per professional nurse ratio was only four patient per nurse per day, a superior ratio than in the public sector.

Table 4.16 Ratio of Beds to Selected Health Personnel in Private Hospitals in the Northeast, 1996

Ratio	Northeast	Country average
Beds per doctor ratio		
- Full-time	18	10
- Part-time	5	4
Beds per professional nurse ratio		
- Full-time	9	4
- Part-time	3	4
Beds per technical nurse ratio		
- Full-time	60	47
- Part-time	3	13
Out-patient per full-time doctor (per day) ratio	29	22
In-patient per full-time doctor (per day) ratio	4	2
In-patient per full-time professional (per day)ratio	5	2

Source: Northeast Development Centre, NESDB, 1998, *Northeast Region's Socioeconomic Data*, p. 42

Conclusion

The Northeast region, has made good progress in improving public health and in providing health facilities in commonwith the other regions of Thailand. Nevertheless, the Northeast still lags behind other areas in health indicators, in large part a reflection of its lower level of economic development. There are still health problems to be solved; for example, the emergence of non-communicable diseases which need life-long health care for the patient. The health facilities and health personnel in the public sector of the Northeast are still inadequate to meet the demand. The private hospitals appear to be playing a role in filling the demand gap created by inadequate state health care provision. However, the issue arises as to whether the private hospitals are catering to the rich,

with the level of their fees making them relatively inaccessible to the poor. Is a two-tier system of medical provision emerging? Is private health provision superior to the public health sector? But does the private sector experience the same quality controls as the public sectors? We will return to these and related issues in the subsequent chapters where there is detailed analysis of selected public and private hospitals in the Northeast.

Chapter Five

The Performance of Public Hospitals in the Northeast of Thailand

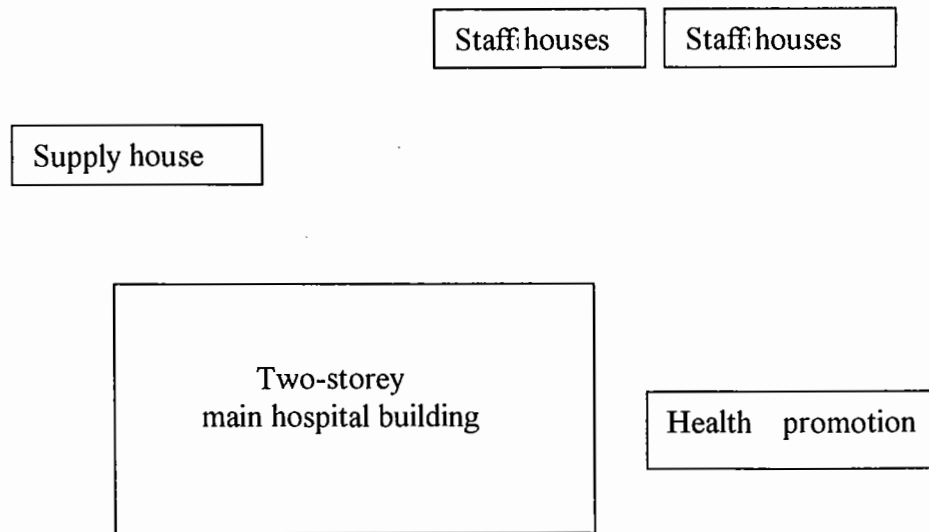
In order to investigate issues of quality, efficiency and equity in the health sector in Northeast Thailand, six hospitals were selected for study. There were three hospitals in the public sector and three in the private sector. This chapter provides details of findings from the three public hospitals. These three hospitals included a 10-beds hospital, a 30-beds hospital and a 600-beds regional hospital.

Hospital A

Hospital A was a 10-bed community hospital, situated in a village of a province in the northern part of the Northeast region. Hospital A started services on 18 September 1995 and formally opened on 3 May 1996. The broad hospital mandate is to provide health services to the public, especially the people in its area. In 1998, Hospital A was responsible for three villages with a population of 1,960 people.

Like other 10-beds hospitals in Thailand, Hospital A had a two-storey main building, two additional small buildings and two houses for hospital staff. The first floor of the main building housed both out-patient and in-patient units while the second floor was occupied by the administrative unit. The health promotion unit and the supply unit were each in separate small building (Figure 5.1).

Figure 5.1 Hospital A's Building Plan



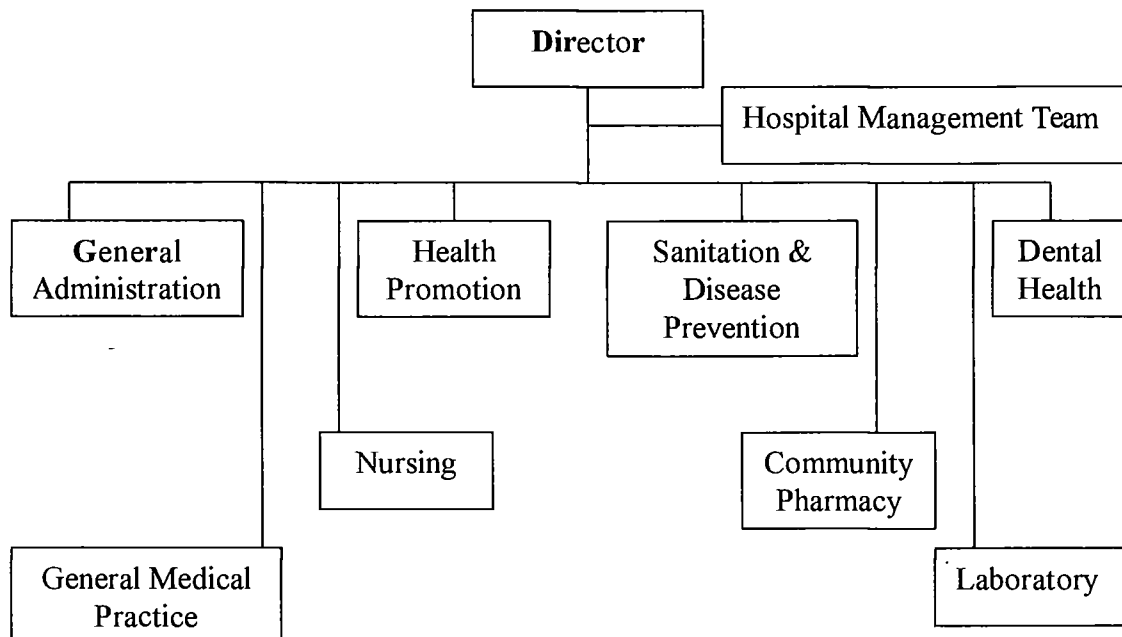
Community hospitals such as Hospital A are regarded as district level medical and health services facilities. They are centres of services for the local community. Their services typically include health promotion, disease prevention, curative treatment, rehabilitation, sanitation and environmental health. Hospital A had the same duties and responsibilities as other community hospitals except for rehabilitation, for which it did not have enough capability. Hospital A's duties and responsibilities included giving diagnosis and treatment to patients at the primary and secondary capability levels both in and outside the hospital. It implemented government health policies studying the health situation of the area and conducting integrated health programmes including health promotion, disease prevention and rehabilitation. Like other community hospitals, Hospital A provided a mobile medical care unit to serve people in the remote areas and managed the referral system to transfer critical patients to get appropriate health care in higher level facilities such as the provincial hospital. Furthermore, it served as an educational resource for health services to disseminate knowledge to the people and local organisations such as health centres, municipal authorities, Tambon Administration Organisations (TAOs) and Tambon Councils. Under this responsibility, it has to train,

develop and supervise tambon and district level health personnel and be able to conduct health development programmes.

Administration

Since it was a small organization, Hospital A's organizational structure was quite flat. The director of the hospital was a medical doctor. The administration of Hospital A was under the supervision of a hospital management team, which was comprised of the director and heads of units. Hospital A was divided into six units namely general administration, nursing, health promotion, sanitation and disease prevention, dental health, and community pharmacy (see Figure 5.2). Each unit had a head as a leader who managed the personnel in his/her section. The head of the nursing unit managed the tasks of the out-patient and emergency care, in-patient ward, operation room and labour room. All nurses, technical nurses, nurse aides and workers were under the supervision of the head nurse. There were two areas of work under the supervision of the hospital management team. These were the general medical practice and laboratory.

Figure 5.2 Hospital A's Organisational Structure



Personnel

There were 32 staff working in Hospital A in 1997. There was one doctor who was also the director of the hospital. A second doctor was on leave for further study. A pharmacist and a pharmacist assistant looked after the community pharmacy sector. There were six professional nurses and eight technical nurses working in the nursing and the health promotion sectors. There was no dentist, just a dental assistant who served the community for dental care. A public health officer was in charge of the sanitation section. The hospital hired nine casual staff to work as cleaners and helpers in the out-patient and in-patient units. All of hospital A's staff were civil servants except for the nine temporary staff. The civil servants' salaries were allocated by the national government while the temporary staff salaries came from the hospital-generated income such as money collected from patients and donation. Types and number of staff, and salary sources are displayed in Table 5.1.

Table 5.1 Hospital A Staff, 1997

Type of staff	Number	Type	Source of salary
Doctor	1	Civil servant	Government budget
Pharmacist	1	Civil servant	Government budget
Professional nurse	6	Civil servant	Government budget
Technical nurse	8	Civil servant	Government budget
Administrative staff	1	Civil servant	Government budget
Public health personnel	1	Civil servant	Government budget
Accountant	1	Civil servant	Government budget
Dental assistant	1	Civil servant	Government budget
Pharmacy assistant	2	Civil servant	Government budget
Technical staff (laboratory)	1	Civil servant	Government budget
Temporary staff	9	Temporary staff	Generated income
Total	32		

The staff were assigned to Hospital A's different units (see Table 5.2). The out-patient and emergency unit had four professional nurses, five technical nurses and two nurse aides. The in-patient unit, operation room and labour room had a professional nurse, two technical nurses and a nurse aide. The health promotion unit had a professional nurse and a technical nurse. The sanitary unit was comprised of one public health officer and a technical nurse. The pharmacy unit had a pharmacist and an assistant while the dental unit had only a dental assistant. The administration unit did not have direct contact with patients. It included administrative staff, an accountant and an assistant. The dental unit, administration unit, health promotion unit and sanitary unit worked only during office hours from 8 am to 4 pm whereas the out-patient and in-patient units had three shifts. The morning shift ran from 8am to 4 pm, the afternoon shift was 4 pm to 11pm and the night shift was from 11pm to 8 am.

Table 5.2 Hospital A Staff Assigned in Selected Units

Unit	Number of staff			
	RN ¹	TN ²	Public health staff	Nurse aide
Out-patient and emergency unit	4	3	-	2
In-patient, labour and operating rooms	2	2	-	1
Health promotion unit	1	1	-	-
Sanitation unit	-	1	-	-

1 RN = Professional Nurse

2 TN = Technical Nurse

Hospital A had a small number of staff who were normally rotated to work in different units. For example, in the morning shift staff were divided between the in-patient, and out-patient and emergency units. During the afternoon and night shifts staff were shared among the two units. A professional nurse, a technical nurse and a nurse aide looked after all units during the afternoon and night shifts (see Table 5.3).

Table 5.3 Staff Assigned in Hospital A's Service Units

Shift	In-patient unit	Out-patient & Emergency unit
Morning shift		
- RN	1	3
- PN	2	4
- Nurse aide	1	3
- Worker	-	1
Afternoon shift	Both Units	
- RN	1	
- PN	1	
- Nurse aide	1	
Night shift	Both Units	
- RN	1	
- PN	1	
- Nurse aide	1	

1 RN = Professional Nurse

2 PN = Practical Nurse

Budget

Hospital A received a budget of 1.2 million Baht for main operating costs from the government. The government budget is normally organized as a line-item budgeting system in which Hospital A had to propose the budget plan to the government and was usually allocated the requested budget. This budget had to be used as requested, and could not be manipulated to use for other purposes. If Hospital A did not spend all of the budget as requested, the remaining budget had to be returned to the government. The hospital could also generate revenue from fees collected from patients and donations. The generated revenue was more flexible to spend. Generated revenue could be used for wages, building and equipment. The hospital board had the authority to approve the

spending of the generated revenue. The director could approve expenditure up to the amount of 100,000 Baht. If the hospital could not spend all the generated revenue, it could be kept in various funds of the hospital such as the human resource development fund and the land and building fund. The generated revenue gathered in 1997 was 493,589.01 Baht. The budget of 1997 was 1,013,142.42 Baht. The expenditure of 1997 was 911,369.57 Baht. The budget carried over for 1998 was 595,361.86 Baht.

The hospital had basic equipment for services in each unit, such as an x-ray machine, fundamental laboratory apparatus, delivery sets, operating sets, emergency sets, and wound dressing sets. Hospital A had started to use computers. Four computers were being used in the registration unit, pharmacy unit, and the accounting and administration unit. The hospital was also establishing a computerised information system. The information inputting was not yet completed. Staff were still learning to use the computers to collect information and access it. Hospital A was a new hospital where the information collection, analysis and reporting in the ministry format were incomplete. My information gathering from secondary data, questionnaires, in-depth interviews and observation revealed the overall picture of Hospital A as reported below.

Activities

Hospital A was performing mostly curative care followed by health promotion and disease prevention. In 1997, there were 6,844 new patients, and a total of 21,592 patient visits to the out-patient unit. The out-patient unit dealt with an average of 75 patients per day. For the in-patient unit, there were 1,005 patients during the year accounting for 2,065 days of hospital stay. The average hospital stay was 2 days per patient. Most of the out-patients came for services in internal medicine (9,762 patients) followed by paediatrics (4,466 patients), surgery (3,239 patients) and dentistry (1,339 patients). The picture was also similar in the in-patient department. There were 547 patients admitted for internal medicine, 237 patients for paediatric care and 77 patients for surgery (see Table 5.4).

Table 5.4 Type of Medical Care, Numbers of Patients and Category of Patients in Hospital A, 1997

Type of Medical Care	Out-patients	In-patients
Internal medicine	9,762	547
Paediatric	4,466	237
Surgery	3,239	77
Eye	375	1
Obstetric-gynecology	373	85
Ears Nose Throat	120	-
Orthopaedic	36	13
Dentistry	1,339	-
Others	813	-

Hospital A is one of the smallest community hospitals in Thailand. It performed very few surgical operations. In 1997, there were only 51 surgical operations, of which 31 were minor and 20 were major. Major operations in Hospital A were typically appendectomy, herniaoplasty and sterilisation. Minor surgical operations were typically incision and drainage of wounds.

Hospital A's activities in the maternal and child health areas covered health promotion, and preventive and curative services. In 1997, it gave prenatal care to 334 patients who visited the hospital 702 times with the average of two times per pregnancy. However, only 100 deliveries were performed in Hospital A in 1997 of which 95 were normal labour and five involving abnormal delivery. There were four abortions. Postpartum care was provided to only 25 mothers (see Table 5.5). There was no fetal death, still birth and maternal death.

Table 5.5 Maternal and Child Health Services in Hospital A, 1997

Type of care	Number of patients
Prenatal care	334 (702 times)
Delivery	100
-Normal delivery	95
-Abnormal delivery	5
-Abortion	4
Postpartum care	25

Hospital A provided both permanent and non-permanent family planning methods in 1997. Most of the patients came for injections (188 patients) which accounted for 70 percent of family planning care in the hospital. Forty-eight patients were given oral pills and fourteen had intra uterine devices. The hospital also performed sterilisation for fifteen women (see Table 5.6).

Table 5.6 Family Planning Services in Hospital A, 1997

Type	Number of patients	Percentage
Injection	188	70.9
Oral pill	44	16.6
Women sterilisation	15	5.7
Intra uterine device (IUD)	14	5.3
Implantation	4	1.5
Men sterilisation	0	-
Total	265	100

The immunisation programme in Thailand includes basic immunisation for children against tuberculosis, diphtheria, pertussis, tetanus, polio and measles. Normally children get only one shot of BCG (tuberculosis vaccine) a day after birth. Children get diphtheria, pertussis and tetanus (DPT) and oral polio vaccine (OPV) five times, the first three times at 2, 4 and 6 months, and 2 boosters at the age of 4 and 6 years. In Hospital

A in 1997, 63 children receive BCG immunisation, while 67 children were immunised against measles (see Table 5.7). The numbers of DPT and OPV immunisations were supposed to be equal. However, the number of OPV cases (602 cases) was more than 2 times higher than for DPT (286 cases). This was because the hospital had joined the National Anti Polio Campaign. Hospital A also had hepatitis B and encephalitis vaccines for clients. There were 254 hepatitis B vaccine injections and 80 encephalitis vaccinations in 1997.

Table 5.7 Immunisation Service of Hospital A, 1997

Vaccines	Number of Person Vaccinated
Tuberculosis (BCG)	63
Diphtheria Pertussis Tetanus (DPT)	286
Diphtheria Tetanus (DT)	-
Tetanus for pregnant women	214
Oral polio vaccine (OPV)	602
Measles	67
Rubella	-
Hepatitis B	254
Encephalitis	80
Total	1566

Community hospitals have limited medical capacity and so have a responsibility for referring cases for which they cannot give services to better equipped hospitals. In 1997, Hospital A referred 173 patients to other hospitals. The hospital also received a reverse flow of 107 patients from other hospitals to be cared for at Hospital A as the patients recovered from their serious conditions. The total number clients who got services from Hospital A (all types of services) were 8,462 people with the total of 35,251 times. Only four patients died in the hospital in 1997.

Hospital A also carried out school health services. It looked after a primary school with 513 students. Hospital A's staff went to the school at least once a month where their

work included training student leaders, immunisations, and physical check up and growth monitoring (weight, height and nutritional status). The dental unit also did community service at least twice a month and dealt with an average of 900 people per year.

The sanitation and disease control department had responsibility for controlling food and water-borne diseases, parasitic diseases and tuberculosis. Most of the work was to control the food and water-borne disease, diarrhoea. It gave health education, helped to improve the sanitary condition of the villages and gave oral rehydration solution (ORS) to patients. The sanitary unit conducted stool examination to find cases of parasitic infection and then gave treatment. The parasitic infections included liver fluke, hookworm, tape worm, ascarralis and ring worm. The tuberculosis control included sputum examination, registering new cases, monitoring cases and discharging people from the unit's responsibility after being cured.

In order to perform all necessary tasks, Hospital A needed staff to work overtime. For an additional shift the pharmacist was paid 500 Baht, a professional nurse 400 Baht, a technical nurse 300 Baht and a pharmacy and dental assistant 200 Baht. The job of a professional nurse who worked overtime included, physical examination, prescription of drugs, collection of fees and delivery of babies. The technical nurse assisted the professional nurse. The workers undertaking overtime looked after the patients in the in-patient section, registered new patients and helped in emergency work. The professional nurse would report to the doctor in the case of patients needing admission to the hospital and operations.

Hospital A was a very new hospital, in operation for only three years. Most of the staff were quite young. The director, the only doctor, had recently graduated with a degree in medicine. He had been a general practitioner (GP) for 2 years before being appointed director of Hospital A. The head of the nursing department was 27 years old and got her Bachelor of Nursing 7 years earlier. She had moved from another hospital 3 years ago to work in Hospital A. Neither person had experience in hospital administration and had never been trained in management. However, the small size of the hospital and the youthfulness of the staff, appeared to facilitate good formal and informal communication. There were monthly meetings for the heads of units for planning and sharing information.

A meeting for all staff was also held monthly. The nursing department met every month while the temporary staff had occasional meeting. The heads of department had the delegated authority to deal with their own departmental matters. With problems the heads of department could not solve, they could consult the director informally. If the matters could be solved within the departments they were not referred to the management team.

The hospital fees charged to patients were similar to other hospitals. The fee for delivering a baby was 500 Baht (not including medication). The fee for appendectomy was 1,000 Baht for normal patients but was 3,000 Baht for patients who could reimburse from third party sources. Drugs were sold at market price meaning they were not cheaper than purchases from a commercial drug store. One tablet of paracetamol cost 0.5 Baht the same price as the commercial drug store. Hospital A used antibiotics for infectious prequation. In normal appendicitis, the hospital gave gentamicine and chloramphenical as pre-operation medicines. Furthermore, after the operation, the doctor prescribed ampiciline, gentamicine and cholamphenical for injection to the patients. It was not the recommended or normal practice. Normally, acute appendicitis does not need any antibiotic either pre and post operation. Staff explained that the doctor did not want to risk infection which would ruin the hospital's reputation and so gave antibiotics to patients.

Staff Perceptions

Information was gathered from ten staff in Hospital A. Most respondents were young, aged between 21 and 38 years. Seven out of ten were single. Five respondents had finished certificates (1-3 years of post secondary education) while four of them had bachelor degrees. They had finished their education from one to nine years ago with the average of 4.7 years. Their salaries ranged from 3,700 to 11,760 Baht per month with the average of 7,459 Baht. Their extra income from working overtime or outside the hospital ranged from 600 to 2,600 Baht per month with the average of 1,837.5 Baht. The respondents were comprised of three professional nurses, two technicians, a technical nurse, a nurse aide, an administrative officer, a pharmacist and a dental assistant

(see Table 5.8). The respondents indicated that their work time ranged between 40 and 80 hours per week with the average of 49.7 hours.

Table 5.8 Types of Staff Responding to the Questionnaire in Hospital A

Type	Number
Professional nurse	3
Technician	2
Technical nurse	1
Nurse aide	1
Pharmacist	1
Administrative officer	1
Dental assistant	1
Total	10

The information gathered from the ten staff of Hospital A indicated that the staff did not have a clear idea of Hospital A's policies. Most Hospital A staff thought that the hospital wanted them to give the patients good service (six out of ten staff). Four of the respondents believed that Hospital A expected them to do their best for the hospital's sake and to make the community satisfied with the hospital.

Health personnel generally liked working in Hospital A. The most common reasons for job satisfaction in the hospital was that they were doing the community service (eight out of ten) and getting good opportunities for their own futures (eight staff) (see Table 5.9). Six out of ten thought that they had freedom to perform their job and had a good social status. Three respondents identified that they like working there because of good salaries.

Table 5.9 Reasons Staff Liked Working in Hospital A

Reason	Number of responses
Serve the community	8
Good opportunity for their future	8
Social status	6
Freedom in their profession	6
Good salary	3

Hospital A staff believed that the most important factors attracting patients were good services and good quality staff (eight responses each), cheap fees and quick service (seven responses each) (see Table 5.10). Only one person thought modern equipment was the attracting factor.

Table 5.10 Perceptions of Hospital A's Staff on Factors Attracting Patients to Hospital A

Reason	Number
Good services	8
Good quality staff	8
Quick service	7
Cheap fee	7
Modern equipment	1

Responses indicated that there were perceived inadequacies in the numbers of all types of staff except administrators (Table 5.11). For example, all respondents identified lack of specialist doctors, while nine of the staff thought there were not enough supporting staff. Most staff also believed there were inadequate technicians (eight responses), nurses (seven responses) and general doctors (six responses). Most of the staff thought that the hospital had enough administrators (six respondents).

Table 5.11 Perceptions of Hospital A's Staff on Adequacy of Staff

Type	Adequate (Number)	Inadequate (Number)
Administrator	6	4
General doctor	4	6
Specialised doctor	-	10
Nurse	3	7
Technician	2	8
Supporting staff	1	9

In terms of quality, they judged all types of staff to be good and to a lesser extent fair (see Table 5.12). Eight respondents viewed the general doctor and technician as good. Six staff thought the administrators and nurses were performing well. No types of staff were viewed as bad or very bad while there was only one response in the excellent category.

Table 5.12 Perceptions of Hospital A's Staff on Quality of Staff

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	-	6	4	-	-
General doctor	1	8	1	-	-
Specialist doctor	-	-	-	-	-
Nurse	-	6	4	-	-
Technician	-	8	2	-	-
Supporting staff	-	5	5	-	-

Questions on staff perceptions of patients' problems revealed one major issue and several minor ones. Five staff believed that there were not enough beds for admission in Hospital A (see Table 5.13). Two staff thought patients had very slow service. One member of staff thought there was overcrowding of patients with many patients waiting

for services. Another believed there were not enough doctors, while one person noted inadequate modern equipment.

Table 5.13 Perceptions of Hospital A's Staff on Patients' Problems in Getting Services in Hospital A

Problems	Number
Not enough in-patient beds	5
Very slow service	2
Overcrowded of patients waiting for services	1
Inadequate number of doctors	1
Inadequate modern equipment	1

Staff identified the most critical areas for Hospital A's improvement as quantity of staff (5 responses), environment and equipment (4 responses each) (see Table 5.14). The respondents saw a need for more modern equipment and increased numbers of staff especially general doctors and technical staff. They also agreed that the in-patient unit was in need of improvement. This involved both the building and the quality of care. The hospital was also seen to need a better information system. One person referred to data collection problems. Four respondents also wanted to have a better environment outside the buildings, improved sanitation and landscaping of the area surrounding the buildings. One person mentioned the need for staff development opportunities for better quality health care to the patients. One person pointed out that staff wanted better welfare such as the provision of more staff houses and greater attention to safety.

Table 5.14 Perceptions of Staff on Problems in Hospital A

Problems	Number
Inadequate staff	5
Inadequate equipment	4
Environment	4
Service	2
Buildings	1
Welfare	1
Problems	Number
Working system	1
Safety	1
Sanitation	1
Information system	1
Opportunity for staff development	1

Patient Perceptions

Ten patients in Hospital A responded to the questionnaire. Six of the patients were from the out-patient unit while four patients were in the in-patient ward. They were aged 26 to 80 years old. Their income ranged from 1,000 to 15,000 Baht per month with the median of 5,500 Baht (SD = 4662.41). (The exchange rate in 1998 was 35 Baht per 1 US\$). Almost all patients (eight persons) finished only primary education and most of them (seven patients) were farmers and workers. All but one patient lived not further than ten kilometres away from the hospital. Most of the patients did not complain about transportation to Hospital A. However, two of the patients identified that the road to the hospital was under construction and was a transportation problem. Most did not pay fees but used various social security schemes. Five (50 percent) respondents used the welfare scheme for their children age 0-12 years old while two patients had health cards (see Table 5.15). Others were on welfare for the elderly and the civil servant health scheme.

Table 5.15 Sources of Patient Payment for Hospital A's Fees

Patient's fee paid by	Number
Health card	2
Welfare for the elderly	1
Welfare for children 0-12 years old	5
Patient	1
Civil servant scheme	1

The major reason why respondents chose to get service from Hospital A was almost entirely because they lived near the hospital (nine persons, 90 percent of respondents) (see Table 5.16). Four patients also stated that they came because of good service. Other reasons were good medical care by the doctor and nurses (four persons); cheap fees (three persons); and good reputation of the hospital (two persons).

Table 5.16 Reasons the Patients Chose to Get Service from Hospital A

Reasons	Number
Live near the hospital	9
Good service	4
Good medical care	4
Cheap fees	3
Good reputation	2
Give desired information	1
Good staff manner	1
Condition of health card	1

Patients are supposed to know who gave them services. However, only six respondents knew the doctor's name. After getting service from Hospital A, six (60 percent) respondents thought the adequacy of equipment in Hospital A was good, three persons considered it fair and one person described it as bad (see Table 5.17). When asked about

the availability and use of modern equipment, eight (80 percent) of the respondents stated the situation was good, one person said fair and one other said bad.

Table 5.17 Perceptions of Patients on the Equipment of Hospital A

Equipment	Excellent	Good	Fair	Bad	Very bad
Adequacy of equipment	-	6	3	1	-
Availability and use of modern equipment	-	8	1	1	-

Two (20 percent) of the respondents thought the physical check-up by the doctor was excellent while the rest (eight persons) thought it was good (see Table 5.18). The treatment by the doctor, nursing care and care by other staff were also perceived by respondents as excellent (one person each) and good (nine persons, 90 percent).

Table 5.18 Perceptions of Patients on the Quality of Care by Different Types of Health Personnel

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	2	8	-	-	-
Treatment by doctor	1	9	-	-	-
Nursing care	1	9	-	-	-
Care by other staff	1	9	-	-	-

The waiting time at Hospital A was not a problem. None of the patients thought they received slow service. The waiting time to see the doctor was stated as quick by eight persons (80 percent) (see Table 5.19). The waiting time to pay for services was also perceived as quick by seven persons (70 percent). Likewise, the waiting times to get treatments was perceived as quick by six persons (60 percent). The average time for a visit for out-patient care was one to two hours. It was a very quick service. None of the patients spent more than half a day to obtain the services in the out-patient unit.

Table 5.19 Perceptions of Patients on the Waiting Time for Various Activities in Hospital A

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see the doctor	1	8	1	-	-
Waiting to pay for service	-	7	3	-	-
Waiting to get drugs	1	6	3	-	-

The respondents were satisfied with the cleanliness of the hospital both in the building and in the surrounding area. Two persons (60 percent) thought the cleanliness inside the building was excellent while four persons (40 percent) ranked it as good, and two persons as fair (see Table 5.20). Outside the building was perceived by respondents as cleaner than inside the building. Three persons (30 percent) stated that the cleanliness outside the hospital building was excellent whereas the rest (seven persons) ranked it good. The cleanliness of the toilets was also viewed as good (five persons), and fair (two persons). Two patients did not comment on cleanliness of the toilet since they did not use it.

Table 5.20 Perceptions of Patients on the Cleanliness of Hospital A

Place	Excellent	Good	Fair	Bad	Very bad
In the hospital building	2	6	2	-	-
Surrounding areas	3	7	-	-	-
Toilet	1	5	2	-	-

Patients thought that they had continuity of health care. Two respondents (20 percent) considered the continuity of getting drugs as excellent, eight persons (80 percent) ranked it as good (see Table 5.21). Likewise, the doctor's effort to solve patients' problems impressed patients as excellent (two persons) and good (eight persons). Two of the patients thought the regularity of the doctor's visits was good and two persons identified

it as excellent. Six respondents could not give an answer on regularity of the doctor's visit since they did not have the experience of being admitted to the hospital.

Table 5.21 Perceptions of Patients on the Continuity of Care in Hospital A

Type of continuity care	Excellent	Good	Fair	Bad	Very bad
Continuity in getting drugs	2	8	-	-	-
Regularity of doctor's visits	2	2	-	-	-
Doctor's efforts to solve patients' problems	2	8	-	-	-

All of the respondents (10 persons) felt they had acquired sufficient information for a good understanding on how to look after themselves when released from hospital (see Table 5.22). Regarding their illnesses, six (60 percent) of the respondents believed they were given enough information and understanding about their illness. However, three persons felt they did not get adequate information concerning their illness. Six (60 percent) of the respondents believed they were given sufficient information on their treatment. Four (40 percent) of the patients said they were told about their laboratory results but they seldom understood their meaning whereas one patient felt she did not get any explanation at all.

Table 5.22 Perceptions of Patients on the Information Acquired from Hospital A

Information	No explanation	Explained but seldom understood	Explained and well understood
Laboratory results	1	4	-
Illness	3	-	6
How to take care of themselves	-	-	10
Treatment	3	1	6

All of the respondents were generally impressed with the services of Hospital A especially the overall service quality, staff's manner and reception for patients' relatives (see Table 5.23). Nine persons (90 percent) viewed the collaboration among staff as good. One patient thought it was fair. Most of the patients identified emergency care (seven persons) and prevention of complications (eight persons) as good. However, two patients viewed the prevention of complications as bad.

Table 5.23 Perspectives of Patients on the Quality of Services in Hospital A

Type	Excellent	Good	Fair	Bad	Very bad
Staff collaboration	-	9	1	-	-
Emergency care	-	7	3	-	-
Prevention of complications	-	8	-	2	-
Staff's manner	-	10	-	-	-
Reception for relatives	-	10	-	-	-
Overall service quality	-	10	-	-	-

The level of participation of patients in decision-making about examination or operation was perceived by all respondents as high (see Table 5.24). The level of participation by patients in present and future treatment of their illness was seen as high by six patients (60 percent). However, four (40 percent) of the patients identified their participation in present and future treatment as very low. All of the respondents who experienced laboratory tests (six persons) thought they got appropriate laboratory tests in Hospital A.

Table 5.24 Perspectives of Patients on the Participation in Decision-making on Their Health

Type	Very much	Much	Average	Low	Very low
Participation in present and future treatment	-	6	-	-	4
Participation in decision on examination or operation	-	10	-	-	-

Patients suggested that Hospital A should improve in many areas. Firstly, half of the patient wanted the hospital to be expanded, especially to have more beds in the in-patient unit. Secondly, four patients (40 percent) suggested that Hospital A should have more staff in the hospital especially doctors and nurses and get modern equipment (four patients) (see Table 5.25). Other recommendations included improving the cleanliness of toilets and in-patient ward, getting more equipment, and improving the surface of the road to the hospital.

Table 5.25 Improvements to Hospital A Identified by Patients

Improvement	Numbers
Expand the hospital	5
More staff	4
Modern equipment	4
Cleanliness of toilets and in-patient ward	2
More equipment	1
Surface road to the hospital	1

All of the patients said they would return for service in Hospital A if they needed help because it was near their house (five patients), it provided good and quick service (three patients), and had developed a good reputation (two patients). Most of the patients

(eight persons) said that they would recommend their relatives and friends to get services at Hospital A. Only one patient disagreed with this view on the grounds that there are other hospitals which have better or more modern equipment than Hospital A.

Conclusion: Hospital A

Hospital A is one of the smallest types of hospital in the Northeast and also in Thailand. Owing to its recent establishment its staff have been there only for a relatively short time. Also, they have no management training or experiences. They had never introduced any quality improvement measures in this hospital. However, the performance of Hospital A was judged to be good by both patients and staff. There was no obvious serious conflict among staff. They had opportunities to voice their opinions in the regular hospital meeting. The hospital provided facilities for meetings and staff recreation such as a comfortable room equipped with audio-visual aids and other equipment. The head of each unit had the delegated authority to manage and solve the unit's problems. In cases where there were problems which they could not solve at their level, the unit heads could ask for advice from the director. The staff expressed good levels of job satisfaction although there were some worries about the local community's expectations of the services. The staff mentioned that the hospital was located in the constituency of a powerful politician who influenced the establishment of the hospital. Staff in Hospital A were quite worried that if the community was not satisfied with Hospital A the particular politician might take some action. The staff acknowledged that their hospital was rather new and still had inadequate staff and equipment. The staff were young and generally inexperienced in hospital work. Moreover, Hospital A is just 10 kilometres from a 60-beds community hospital and about 15 kilometres from a 120-beds community hospital. These two hospitals were superior in terms of equipment and staff. The staff mentioned that they had to participate in many social activities such as joining in the parades of various festivals. They were concerned because they had to send at least 3-4 staff to join these functions. This left few staff to attend to the medical and administrative tasks. The staff also tried to get trust from patients. Antibiotics were sometimes overused to prevent infections which could ruin the hospital's reputation.

The patients were satisfied with the hospital staff. They considered the staff as kind, gentle and good mannered. They were also of the opinion that they got good services from this hospital. Only one patient thought that this hospital did not have enough equipment, especially modern equipment. This probably resulted from the patients not having much knowledge about hospital medical care. As long as they got the services they desired they were happy. They did not have clear ideas about such things as what medicine they should get or what treatment they should receive. They just wanted more staff especially doctors and nurses. The limited number of beds and the small area of the in-patient unit were also among the concerns of the patients.

Hospital B

Hospital B was a 30-bed community hospital located 32 kilometres from the major city of a northeastern province which had a population of 2,467,831. In 1997, the district where Hospital B was located had a population of 92,361. There were 44,674 men and 47,687 women. The population density was 66 persons per square kilometre. The district was comprised of sixteen sub-districts (Tambon), 182 villages, seven Tambon Administration Organisations and two sanitary municipalities. The major occupation of the people was agriculture. In this district there was only one community hospital and seventeen health centres. There were eight doctor's clinics, a dental clinic, five nursing clinics, nine modern pharmacies and two traditional pharmacies.

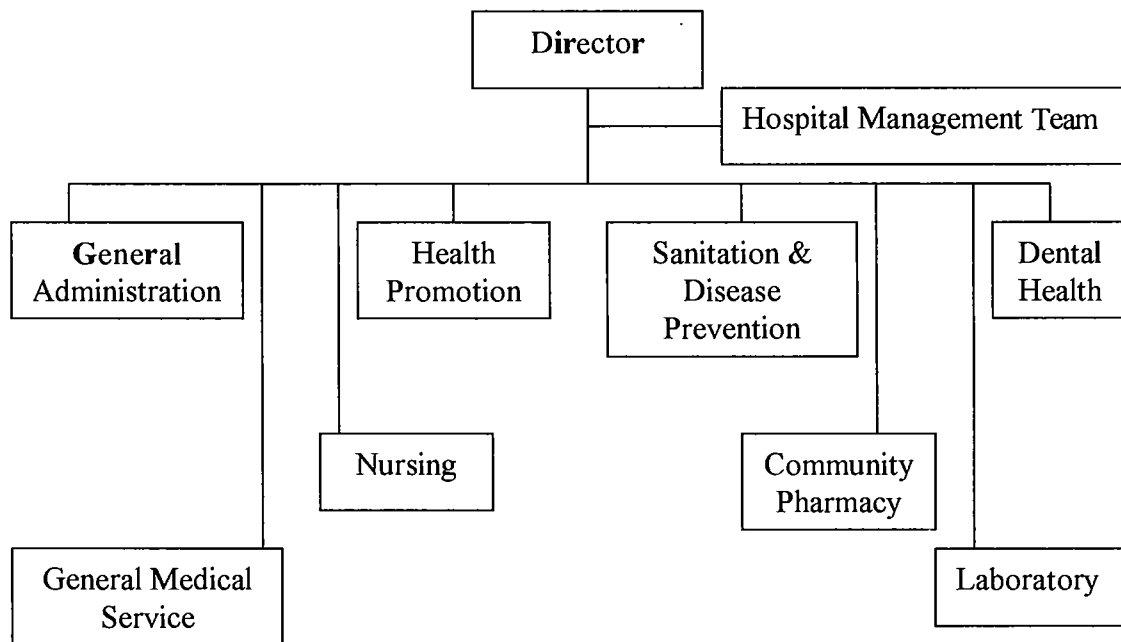
In 1997, Hospital B had four roles and responsibilities including providing integrated health services to the people; training health personnel; implementing primary health care and community development; and other responsibilities. The integrated health services were wide-ranging and involved health promotion, such as maternal and child health, family planning, school health, health education, community nutrition, dental health and community pharmacy; diseases prevention and control which included sanitation, environmental health and disease surveillance; curative treatment and rehabilitation such as medical and nursing care, health care via mobile clinics and physiotherapy; and a referral service for patients to other hospitals for appropriate treatment. The training function involved providing and supporting medical and health education to health

personnel, medical students, volunteers and the general population. This responsibility also entailed supervising and advising subordinate health care facilities, primary health care units and related organisations. The primary health care and community development role focused on implementing primary health care work in the sub-district where Hospital B was located, and on supporting local organisations in the district. Other responsibilities were to establish and maintain an efficient information system for the hospital so that it could participate effectively in the district and provincial health organisation network. The hospital also assisted the sub-district mobile unit to provide services to the people in remote areas.

Administration

Hospital B's organisational structure is shown in Figure 5.3. The hospital had two doctors one of whom also served as the director of the hospital. Both doctors performed medical services for patients. The administration of Hospital B was under the supervision of a management team, which comprised the director and head of each unit. Hospital B was divided into eight units, namely general administration, general medical service, nursing, sanitation and disease prevention, dental health, laboratory, and community pharmacy. Each unit had a head of unit to lead and manage personnel in his/her unit. Social welfare and physiotherapy were under the direct supervision of the hospital management team.

Figures 5.3 Hospital B's Organisational Structure



Personnel

Hospital B had two doctors, a dentist, a pharmacist, 22 professional nurses, twelve technical nurses, four public health personnel and fifteen nurse aides to give direct health services to the patients (see Table 5.26) The three office staff and accountant helped in the hospital planning and administration work. The two technicians were engaged in laboratory work.

Table 5.26 Hospital B Staff, 1997

Type of staff	Number	Type	Source of salary
Doctor	2	Civil servant	Government budget
Pharmacist	1	Civil servant	Government budget
Professional nurse	12	Civil servant	Government budget
Technical nurse	7	Civil servant	Government budget
Administrative staff	3	Civil servant	Government budget
Public health personnel	6	Civil servant	Government budget
Accountant	1	Civil servant	Government budget
Dental assistant	2	Civil servant	Government budget
Pharmacy assistant	2	Civil servant	Government budget
Technical staff (laboratory)	2	Civil servant	Government budget
Temporary staff	12	Temporary staff	Hospital income
Total	50		

Hospital B divided its services among six units. There were the out-patient unit, emergency unit, in-patient unit, labour room and operating room, the health promotion unit, and the sanitation unit. Hospital B also operated three shifts. The out-patient unit had three professional nurses, a technical nurse and a nurse aide on the morning shift as did the emergency unit and the in-patient unit. During the afternoon and night shifts there was only one of each type of staff on duty.

Budget

In 1997, Hospital B received a budget of 3.8 million Baht from the government. The total income from patients' fees and donations was 7,570,101.58 Baht (see Table 5.27).

The total expenditures of Hospital B in 1997 was 11,419,018.72 Baht (see Table 5.27). Most of the expenditure was from the hospital income which accounted for 66.29 percent (7,570,101.58 Baht) of the total expenditure. More than half of the total expenditure was for materials. The hospital has just finished erecting a new building and

was undertaking the interior decoration. Most of the money for materials was accounted for by this new building. Almost a quarter of the total budget was for staff salaries. Hospital B spent only 4.13 percent of its income on equipment. Basic salaries were paid by the MoPH. More than three quarters of the government budget was for materials (79.42 percent) followed by grants (9 percent), utility cost (7.82 percent) and salary (3.9 percent). Most of the hospital income was spent on material (37.68 percent) and salary (32.31 percent). Hospital income covered all staff wages and the other expenses category.

Table 5.27 Hospital B Expenditure by Types of Budget, 1997

Type of Expenditure	Government Budget Amount (Percent)	Hospital Income Amount (Percent)	Total Amount (Percent)
Wage	-	708,737 (9.36)	708,737 (6.21)
Salary	141,985 (3.69)	2,445,970 (32.31)	2,587,955 (22.66)
Overhead expense	2,736 (0.07)	572,710.60 (7.57)	575,446.60 (5.04)
Materials	3,056,812.55 (79.42)	2,852,357.41 (37.68)	5,909,169.9 (51.75)
Utility cost	301,129.57 (7.82)	102,734.36 (1.36)	403,863.93 (3.54)
Equipment	-	471,293.21 (6.23)	471,293.21 (4.13)
Grant	346,254.02 (9.00)	414,411 (5.47)	760,665.02 (6.66)
Other expenses	-	1,888 (0.02)	1,888 (0.01)
Total	3,848,917.14 100	7,570,101.58 100	11,419,018.72 100

Activities

In 1997, Hospital B's out-patient unit gave services to 79,285 persons who made a total of 84,660 hospital visits (see Table 5.28). There were increasing numbers of patients getting service in Hospital B. In 1997, there was an average of 131 new patients per day whereas in 1995 the figure had been 109 new patients per day. The average number of patients per day had increased to 277 patients per day in 1997 from 233 patient per day in 1995. The number of patient visits to Hospital B in 1997 was over 10,000 more than in 1996. Most of the patients came to the medicine section (28,422 patients) followed by paediatrics (8,271 visits) and surgery (7,461 visits). Dental care also involved 7,775 visits. There were 165 patient deaths in the out-patient unit in 1997. A total of 2,221 patients were referred from Hospital B to other hospitals.

Table 5.28 Hospital B Out-patients Service, 1995-1997

Out-patient	1995	1996	1997
Total patients			
Persons	31,235	34,072	37,345
Numbers of visits	66,578	68,579	79,285
Medicine	28,436	27,131	28,422
Paediatric	9,791	7,192	8,271
Surgery	6,411	6,375	7,461
Obstetric-gynaecology	1,168	1,491	4,950
Orthopaedic	628	370	394
Ear Nose Throat	600	516	626
Eye	631	436	472
Dentistry	6,894	7,722	7,775
Others	12,112	17,346	20,285
Total	66,571	68,579	79,285
Deaths	119	149	165
Hospital visits per day	233	240	277
Referred to other hospitals	1,336	1,861	2,211
Received from other hospitals	3,686	3,625	3,109

Note: Working days = 365-104 (Saturday, Sunday) +25% of Saturday and Sunday
= 286 days/year

Respiratory tract diseases were the leading cause of morbidity (12.18 percent) for the patients who got service in Hospital B followed by gastro-intestinal problem (11.78 percent) (see Table 5.29). Problems of the circulatory system accounted for more than 5,000 patients whereas mental and behavioural disorders involved 4,607 patients.

Table 5.29 Ten Leading Causes of Morbidity in the Out-patient Unit of Hospital B, 1997

Disease or causes	Number of visits	Percent
Respiratory disease	8,545	12.18
Gastro-intestinal and oral cavity problems	8,266	11.78
Other clinical and laboratory signs and symptoms which could not be diagnosed	5,484	7.82
Endocrine, nutrition and metabolism	5,176	7.38
Circulatory system	5,045	7.19
Mental and behavioural disorders	4,607	6.57
Skin and connective tissue	4,466	6.36
Musculo-skeleton system	4,048	5.77
Parasite	3,797	5.41
Others	20,374	29.04
Total	70,168	100

There was a total of 7,268 patients admitted in Hospital B in 1997 accounting for 19,161 admission days. The bed occupancy rate was 175 percent per day. It had increased from 149 percent in 1995 and 1996. It meant that in 1997, there was an average of 52-53 patients staying in Hospital B each day while there were only 30 beds. This necessitated patients having to share beds with other patients. The average hospital stay was 1.67 days per patient. Most of the patients were in the medical section (3,499 patients) followed by paediatrics (2,095 patients) and the obstetric-gynaecology section (816 patients) (see Table 5.30). The trend in Hospital B was for increasing numbers of in-patients. In 1997, there were almost 1,000 more persons admitted as in-patients than in

1995. Deaths in Hospital B were decreasing from 32 patients in 1995 to only seventeen in 1997. In 1997, the average patient stay in Hospital B was 2.6 days. When there were more than ten patients in the wards, it was necessary to put beds in the corridors of the in-patient wards.

Table 5.30 Numbers of In-patients Admitted to Hospital B, 1995-1997

Unit	1995	1996	1997
Medicine	2,600	3,154	3,499
Paediatric	1,787	1,693	2,095
Obstetric-gynaecology	924	801	816
Surgery	864	974	803
Orthopaedic	84	68	30
Eyes	12	8	11
Ears Nose Throat	11	15	14
Dentistry	-	-	-
Total	6,284	6,721	7,268
Deaths	32	24	17
Total hospital stay (days)	16,152	16,402	19,161
Average hospital stay (days)	2.57	2.44	2.64
Bed occupancy rate (%)	149.55	149.75	174.99

For in-patients, intestinal disorder and infection was the leading cause of morbidity (27.2 percent) in 1997 followed by parasitic diseases (18.2 percent), normal delivery (16.4 percent) and traffic accidents (13.4 percent) (see Table 5.31).

Table 5.31 Leading Causes of Morbidity of In-patients in Hospital B, 1997

Diseases/causes	Number of Patients	Percent
Intestinal, peritoneal disorder/infection	1,190	27.2
Parasitic and other infectious diseases	796	18.2
Normal delivery	717	16.4
Traffic accident	585	13.4
Urinary tract and genital organ	291	6.7
Acute upper respiratory tract infection/disorder	276	6.3
Pneumonia	218	4.9
Other signs and symptoms which could not be diagnosed	301	6.9
Total	4,374	100

In 1997, there were 158 in-patient deaths. More than half of the deaths (94 patients) were caused by traffic accidents followed by respiratory failure (16.97 percent) and drowning (7.27 percent) (see Table 5.32).

Table 5.32 Leading Causes of Mortality in Hospital B, 1997

Causes	Numbers	Percent
Traffic accident	94	56.9
Respiratory failure	28	16.9
Drowning	12	7.2
Heart failure	9	5.4
Gunshot wound	6	3.6
Head injury	5	3.0
Senility	2	1.2
Cancer	2	1.2
Total	158	100

Patient Expenditure

In 1997, out-patients paid an average of 94.5 Baht per patient per day (see Table 5.32). It was lower than the average of 1996 (121.48 Baht) and 1995 (116.05 Baht). The expenditure of the in-patients showed the same trend. In-patients spent an average of 257.57 Baht per day in 1997 whereas they spent an average of 343.03 Baht per day in 1996. The explanation might be a combination of greater efficiency at the hospital and lower capacity of patients to pay during the country's economic crisis in 1997.

Table 5.33 Hospital B Average Patient Expenditure, 1993-1997

Year	Average expenditure of out-patient (Baht/patient/day)	Average expenditure of in-patient (Baht/patient/day)
1993	33.1	104.5
1994	101.9	301.8
1995	116.1	347.9
1996	121.5	343.0
1997	94.5	257.6

Health promotion

Hospital B looked after health promotion activities for 30 villages in two tambons. There were 4,255 households with 20,904 people living in the area. There were 14 primary schools having 2,882 students and a secondary school with 1,741 students under the supervision of Hospital B. In this area the health promotion network included 474 village health volunteers, 26 community drug funds supplying essential drugs to members, 13 village radio broadcast towers and 26 community primary health care centres.

Maternal and Child Health

In 1997, Hospital B had the target of 297 pregnant women to service (see Table 5.34). However, only 210 pregnant women (70.7 percent of the target) received ante-natal care and post-partal care from Hospital B. All the pregnant women who came for anti-natal care were supposed to deliver their babies in Hospital B. However, some of the pregnant women delivered their babies at the regional hospital which is about 40 kilometre from their communities. All of these mothers and babies got post-natal and post-partal care from this hospital.

Table 5.34 Hospital B's Maternal and Child Health Service, 1997

Service	Target Numbers	Actual services	
		Numbers	Percent
Pregnant women	297	297	100
Post-partal women	297	210	70.7
Completed ante-natal care (4 visits)	297	210	70.7
Delivered by hospital staff	297	210	70.7
Post-partal care (3 visits)	297	210	70.7
Post-natal care (for new born; 3 visits)	297	210	70.7

Family Planning

Family planning coverage by Hospital B was 84.33 percent of the target population which was a little lower than 85.72 percent recorded in 1994 (see Table 5.35). The cause of failing to meet the target was women migrating to work in other areas such as Bangkok. The target population for family planning were married women of child-bearing age in the area. The most common method in 1997 was oral pill (47.9 percent) followed by injection (22.1 percent). Female sterilisations dropped from 604 cases in 1994 to 550 cases in 1997.

Table 5.35 Family Planning Services in Hospital B, 1994 and 1997

Method	1994		1997	
	Number	Percent	Number	Percent
Target married women of child-bearing age	2,822		3,002	
Total receiving service	2,419	100	2,624	100
Oral pill	1,007	41.6	1,257	47.9
Injection	526	21.8	579	22.2
Intra uterine device	197	8.1	120	4.6
Female sterilisation	604	24.9	550	20.9
Male sterilisation	70	2.9	58	2.2
Implantation	15	0.6	60	2.3
Family planning rate		85.7		83.44

Immunisation

The vaccination coverage by Hospital B in 1997 was less than in 1994 (see Table 5.36). In 1994, there was complete coverage for all in recommended vaccines and the service was even given to people in other areas making the coverage rate over 100 percent. In 1997, there was only 87.7 percent coverage for BCG, HBV, DPT and OPV for the children aged 1 day to 12 months. This reduction was because some parents took their children with them to working in other areas. Only 70.7 percent of mothers who gave birth in Hospital B had tetanous toxoid (TT) vaccination.

Table 5.36 Immunisation Services in Hospital B, 1994 and 1997

Vaccine	1994		1997	
	Number	Percent	Number	Percent
1. Children aged 1 day-12 months	383		229	
Got completed BCG, HBV, DPT,OPV	392	102.3	210	87.7
2. Children aged 1.5 to 2 years	602		180	
Got Booster of DPT and OPV	657	109.1	205	100
3. Mothers who gave birth	198		297	
Got TT	198	100	210	70.7
4. First yearsprimary school children	383		535	
Got DT and BCG	392	102.3	535	100
5. Grade 6 students	403		440	
Got DT	403	100	440	100
6. Grade 6 female students	213		227	
Got rubella vaccine	213	100	227	100

Note: upper figures are target populations.

Target populations are based on population records in the responsible areas of the hospital.

Nutrition

The health promotion department also ran a nutritional health service. The activities included nutritional status surveillance and weighing children 0-4 years. In 1997, there were 1,294 children (100 percent) aged 0-4 years weighed. There were only 3 children (0.2 percent) with second degree malnutrition well within the 2 percent target of the Eighth National Health Development Plan. Hospital B emphasised proper nutritional practices to community and school children. The staff gave demonstrations and campaigned on nutrition for women who were pregnant, lactating and of child-bearing age. Another major activity was addressing protein calorie malnutrition in children 0-5 years and pregnant women. There was 100 percent coverage for this. By contrast, the

measures to reduce the prevalence of anemia by iron supplementation for women achieved only 70.7 percent coverage. The programme on anemia control in primary school children was 100 percent coverage. Hospital B provided all types of school health programme activities including training student leaders, physical examination, growth monitoring and visual tests.

Health Education

Health education was also a major health promotion activity both in the hospital and in the community. In 1997, there were 360 instances of group health education undertaken by Hospital B. It organised thirteen health exhibitions as instructed by the Ministry of Public Health. Staff gave health education to patients while they were waiting for treatment and also produced health education leaflets. There were two campaigns on endemic diseases. Hospital B also conducted health education via village radio post (328 times), primary health care centres (328 times) and at the reading corners of villages (303 times).

Dental Health

In 1997, there were 6,630 patients who received dental services from Hospital B and came for these services 7,908 times. Most of the services (6,071 patients, 7,447 times) were performed in the hospital while the rest 559 patients were undertaken in the community. There were only seven patients who were admitted to Hospital B for dental service.

Pharmaceutical Service

In 1997, the value of drugs used for treatment in the out-patient department of Hospital B was 7,321,831 Baht (see Table 5.37). The in-patient unit used 2,396,378 Baht for drugs of the total of 12,013,250 Baht spent for drugs. Only 4,552,401 Baht were fully paid by patients for drugs while 6,294,419 were provided free. The amount of 416,269 Baht was contributed for part payment by the patients.

Table 5.37 Payment for Drugs in Hospital B, 1997

Patients	Patient pays all	Partly paid by patient	Free drugs	Reimbursed from third party	Total
Out-patient					
-Prescription	27,925	1,473	48,064	-	77,462
-Amount paid	3,060,751	174,483	-	-	3,235,234
-Free	-	11,821	3,974,776	-	4,086,597
Total amount	3,060,751	286,304	3,974,776	-	7,321,831
In-patient					
-Prescription	5,505	341		1,312	18,214
-Amount paid	1,491,650	53,230	11,056	750,161	2,295,041
-Free	-	76,735	-	-	2,396,378
Total amount	1,491,650	129,965	2,319,643	750,161	4,692,419
Total drugs					
-Prescription	33,430	1,814	59,120	1,312	95,676
-Amount paid	4,552,401	227,713	-	750,161	5,530,275
-Free	-	188,556	6,294,419	-	6,482,975
Total amount	4,552,401	416,269	6,294,419	750,161	12,013,250
Percent	37.9	3.46	52.4	6.24	100

Drugs for treatment were also used outside Hospital B. In 1997, there were twelve mobile clinic of Hospital B which gave services in the community. There were 1,277 patients who received these services at the average of 153 patients per mobile clinic. The total cost of drugs used was 36,865 Baht, an average of 30.07 Baht per patient (see Table 5.38)

Table 5.38 Medicine Used in Hospital B's Mobile Clinics, 1997

Number	Patients	Cost	
	Average number of patients per clinic	Total Amount (Baht)	Average cost per patient (Baht)
1,277	153	36,865	30.07

Staff Perceptions

Twenty-two staff responded to the questionnaire (see Table 5.39). Most of them were female (77.7 percent). Their ages ranged between 22 and 58 years old with the average of 35.5 years. Most of the staff had finished bachelor degrees (54.5 percent). Most of the respondents were professional nurses (40.9 percent) followed by public health personnel, technical nurses and nurse aides (13.6 percent each) (see Table 5.39). These health personnel were from every unit in Hospital B.

Table 5.39 Types of Staff Responding to the Questionnaire in Hospital B

Types	Number	Percentage
Professional nurse	9	40.9
Public health personnel	3	13.6
Technical nurse	3	13.6
Nurse aide	3	13.6
Doctor	1	4.5
Dentist	1	4.5
Pharmacist	1	4.5
Technician	1	4.5
Total	22	100

The respondents had finished their degrees between 3 and 36 years ago with the median of 13.5 years (SD = 8.704). They had been working in Hospital B for 1-24 years with the median of 9 years (SD = 6.735). Their average salaries ranged from 3,700 to 27,000 Baht per month. The average salary for the group was 11,643 Baht. The doctor received

the highest salary. The extra income earned by staff from Hospital B ranged from 300 to 10,000 Baht per month. The median extra income was 1,200 Baht (SD = 2,480.36). This extra income came from working overtime and working outside the hospital, for example on mobile clinics.

Most of Hospital B staff thought that the hospital expected them to do their best for the hospital's sake (77.2 percent), to give the patients good service (59.2 percent) and to make the community satisfied with the hospital (50 percent). When asked the reasons they like working in the hospital, more than 75 percent of the staff answered because they served the community (see Table 5.40). The next most popular answer was that their work gave them good opportunities for their future (63.6 percent), followed by social status (59.2 percent) and freedom in practicing their profession (59.1 percent). Only one member of staff did not like working at the hospital.

Table 5.40 Reasons Staff Liked Working in Hospital B

Reason	Number of responses	Percent
Serve the community	16	75.2
Good opportunity for their future	14	63.6
Social status	13	59.2
Freedom in their profession	13	59.1
Good salary	8	36.4
Do not like	1	4.5

Hospital B's staff believed that the most common factors attracting patients were cheap fees (77.3 percent), good services (42.9 percent) and good quality staff (40.9 percent) (see Table 5.41). Eight staff (36.4 percent) thought that patients got services from this hospital because they had no other choices. Hospital B was the only hospital in the area for some people and it was sometimes a condition in health care and social support schemes that persons obtained services from their local hospital first.

Table 5.41 Perceptions of Hospital B's Staff on Factors Attracting Patients to Hospital B

Reason	Number	Percent
Cheap fee	17	77.3
Good services	9	42.9
Good quality staff	9	40.9
Quick service	6	27.3
Modern equipment	4	18.2
Others	8	36.4

A majority of Hospital B's staff (63.6 percent) thought that there were enough administrators in the hospital although only 54.5 percent of staff believed that there were enough technical nurses (see Table 5.42). Responses indicated that there were perceived inadequacies in all other types of staff. For example, all persons thought that there were not enough specialised doctors, while 90 percent of responses pointed out that there were inadequate general doctors. More than 75 percent of the staff thought that there were insufficient technicians for the services required.

Table 5.42 Perceptions of Hospital B's Staff on Adequacy of Staff

Type of Staff	Adequate		Inadequate	
	Number	Percent	Number	Percent
Administrator	14	63.6	8	36.4
General doctor	2	9.1	20	90.9
Specialised doctor	-	-	22	100
Professional nurse	10	45.5	12	54.5
Technical nurse	12	54.5	10	45.5
Technician	5	22.7	17	77.3
Supporting staff	10	45.5	12	54.5

The quality of administrators of Hospital B was generally below average in the perception of the rest of the staff. About 31.8 percent of responses identified the administrators as ‘bad’ and ‘very bad’ whereas only 18.1 percent thought that the administrators were ‘good’ and ‘excellent’ (see Table 5.43). By contrast, 61.9 percent of staff viewed the specialist’s performance as ‘good’ and ‘excellent’. The general doctor also was identified as ‘excellent’ (22.7 percent) and ‘good’ (63.6 percent). The rest of staff were viewed by their colleagues as ‘fair’ to ‘good’ quality. Almost half of the staff (10 staff) thought that the professional nurses were ‘good’ while 10 others viewed them as ‘fair’. All types of staff except the general doctor and specialised doctor were identified by about 10 percent of staff as being of bad quality.

Table 5.43 Perceptions of Hospital B’s Staff on Quality of Staff

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	1 (4.5)	3 (13.6)	10 (45.5)	6 (27.3)	1 (4.5)
General doctor	5 (22.7)	14 (63.6)	3 (13.6)	-	-
Specialist doctor	1 (4.8)	12 (57.1)	8 (38.1)	-	-
Professional nurse	-	10 (45.5)	10 (45.5)	2 (9.1)	-
Technical nurse	-	8 (36.4)	12 (54.5)	2 (9.1)	-
Technician	-	7 (31.8)	13 (59.1)	2 (9.1)	-
Supporting staff	-	5 (23.8)	13 (61.9)	3 (14.3)	-

Almost all staff (95.5 percent) believed that the patients see the hospital as overcrowded with too many patients seeking services (see Table 5.44). About 75 percent of the staff thought the patients received very slow services and 54.5 percent thought there were not enough beds for in-patients.

Table 5.44 Perceptions of Staff on Patients' Problems in Getting Services in Hospital B

Problems	Number	Percent
Too many patients (overcrowded)	21	95.5
Very slow service	16	76.2
Not enough in-patient beds	12	54.5
Expensive fees	2	9.1
Inadequate number of doctors	2	9.1
Other	3	13.2

The staff thought the hospital needed to improve in many areas: administration (54.5 percent), hospital service (45.5 percent), inadequate staff (36.4 percent), equipment (22.7 percent), limitation of the building (18.2 percent), and environment of the hospital (18.2 percent) (see Table 5.45). Hospital **B** had a severe problem of staff conflict with the director. There was a history of complaints to higher authorities and protests by staff about the director. Many staff identified the leadership problem as the director being narrow-minded, that patronage was rife, that there was inadequate two-way communication between director and staff, and poor interpersonal relationships between the director and staff. Administrative concerns focused on the lack of participation in decision-making for budgets, hospital planning, and staff allocation. Normally the director just planned with the accountant. There was seldom a staff meeting. Staff generally considered there was no transparency in decision-making on important issues. The administrator was considered as 'stingy' regarding the acquisition of medical equipment which would benefit the patients. However, the administrator strongly supported a special ward that was under construction for patients who could afford to pay more for their hospital accommodation. Many staff had not been recipients of staff development both in term of knowledge and skills. Staff complained that they lacked motivation and that this affected hospital services. They wanted more and better equipment as well as training to improve their performance and capability. They also

wanted improvement in the work system whereby doctors would come to work early to reduce the waiting time for physical examination of the patients.

Table 5.45 Perceptions of Staff on Matters Requiring Improvement in Hospital B

Problems	Number	Percent
Administration and leadership	12	54.5
Service	10	45.5
Inadequate staff	8	36.6
Inadequate equipment	5	22.7
Environment	4	18.2
Limitation of the building	4	18.2
Welfare	4	18.2
Working system	3	13.4

In each unit many specific improvements were recommended by staff. The sanitation unit wanted their office upgraded with more equipment and staff. The planning unit also wanted better equipment, especially computers; three or four more staff; and staff development such as training. The head nurse wanted the quality of nursing care to be improved both by in-service training and other training organised by academic and health organisations. The out-patient unit wanted more doctors plus expansion and physical improvement of the unit. They also wished to provide faster service to the patients. Some of the nurses wanted doctors to come to work earlier while many thought the emergency room was too small. The doctor who worked in all areas desired improvement in the quality of care; a faster and more efficient service system; and more motivation among staff. The x-ray unit staff identified a new x-ray machine, one more supporting staff and bigger space as their priorities.

The in-patient unit personnel wanted more staff, expansion of bed capacity, and more equipment for nursing and medical care. Modern equipment such as a ventilator, an infusion pump, and an electrocardiogram were among the in-patient unit's priorities.

Most of the equipment was old and not maintained well. The building was also old and needed a lot of repair while the outside environment was seen to require improvement. Some staff identified patronage as a leadership problem of the head of the in-patient ward. These staff alleged favouritism in task allocation and promotion. The head nurse who was the leader of all nurses, nurse aides and workers in in-patient and out-patient and emergency units was viewed as old fashioned and not assertive. The health promotion unit wanted more budget allocated for the unit's health promotion projects. The registration unit complained that the working system in the unit was not efficient, and that patients' cards were frequently missing. They wanted a computerised system to make the unit's service more convenient and faster as well as more staff and staff development. A quality improvement initiative was seen to be required to improve the unit. The dental unit wanted more equipment and a bigger area. Similarly, the pharmacy unit wanted more equipment and material, and spaces to produce drugs and store materials and drugs.

Patient Perceptions

Fifteen patients in Hospital B responded to the questionnaire. Most of them (60 percent) were in the out-patient unit while the rest (40 percent) were from the in-patient ward. There were nine patients (60 percent) who were female, aged from 15-82 years old with the average age of 43.6 years. Most of the patients (93.3 percent) lived in the district in which the hospital was located. The distance from patients' homes to Hospital B ranged from 2-28 kilometers. Most of persons did not have transportation problems related to travel to the hospital. Eighty percent of the patients had finished primary education. Almost all of the patients (86.7 percent) were farmers or manual workers. Their monthly income ranged from 500 to 4,000 Baht with the average of 2,590 Baht. Most of the patients did not pay for the services (see Table 5.46). They were mostly paid for by third parties. Forty percent of patients used health cards, followed by welfare schemes for the elderly (26.3 percent) and for children (13.3 percent).

Table 5.46 Sources of Patient Payment for Hospital B's Fees

Patient's fee paid by	Number	Percent
Health card	6	40
Welfare for the elderly	4	26.3
Welfare for children 1-12 years old	2	13.3
Patient	2	13.3
Patient's relative	1	6.7
Welfare for the poor	1	6.7

The reasons why patients chose to get service from Hospital B were mostly because they lived near the hospital (93.3 percent) followed by quick service (33.3 percent), cheap fees (20 percent) and as a condition of their health cards (20 percent) (see Table 5.47). No respondent stated that they came because of good reputation, good medical manner, good medical care and modern technology. Only one patient mentioned good service as a reason for choosing the hospital.

Table 5.47 Reasons Patients Chose to Get Services from Hospital B

Reason	Number	Percentage
Live near the hospital	14	93.3
Quick service	5	33.3
Cheap fee	3	20
Condition of health card	3	20
Good service	1	6.7

After getting services in Hospital B, 46.7 percent of the patients thought that the adequacy of equipment in Hospital B was good, 40 percent considered it fair and 13.3 percent as bad (see Table 5.48). When asked about the availability and use of modern equipment, 46.7 percent of the patients identified the situation as good, 33.3 percent as fair and 20 percent as bad.

Table 5.48 Perceptions of Patients on the Adequacy of Equipment and Modern Equipment in Hospital B

Equipment	Excellent	Good	Fair	Bad	Very bad
Adequacy of equipment	-	7(46.7)	6(40)	2(13.3)	-
Adequacy of modern equipment	-	7(46.7)	5(33.3)	3(20)	-

Most of the patients (80 percent) thought that the physical examination and treatment by the doctor was good to excellent. However, twenty percent judged the physical examination as only fair while 20 percent also thought treatment by the doctor was fair and bad. (see Table 5.49). Almost all patients (93.3 percent) thought that services from the nurses were good. Only 6.7 percent classified them as fair. Other health personnel were also generally judged to provide mostly good services (80 percent).

Table 5.49 Perceptions of Patients on the Quality of Care by Different Types of Health Personnel in Hospital B

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	1(6.7)	11 (73.3)	3(20)	-	-
Treatment by doctor	1(6.7)	11 (73.3)	2 (13.3)	1(6.7)	-
Nursing care	-	14 (93.3)	1 (6.7)	-	-
Care by other staff	-	12 (80)	2 (13.3)	1(6.7)	-

The patients were not so impressed with the waiting time in Hospital B. More than 50 percent of patient thought that waiting for physical examination was slow to very slow, while 33.3 percent thought it was average (see Table 5.50). Waiting to pay for the fees and getting drugs were seen to be quicker. More than half of the patients identified

waiting time to pay hospital fees as average. Almost all patients (86.7 percent) thought that the waiting time to get drugs was average, 'not too long'.

Table 5.50 Perceptions of Patients on Waiting Time for Various Activities in Hospital B

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see the doctor	-	2 (13.3)	5 (33.3)	5 (33.3)	3 (20)
Waiting to pay for service	-	2 (15.4)	8 (61.5)	2 (15.4)	-
Waiting to get drugs	-	1 (6.7)	3 (86.7)	1 (6.7)	-

In term of cleanliness, patients thought the inside of the building was better than outside. More than half (60 percent) of the patient identified the cleanliness inside the building as good (see Table 5.51). The rest (40 percent) ranked it as fair. About half of the patients thought that the cleanliness of the surrounding area was fair. However, five respondents (35.7 percent) thought that the toilets were dirty to very dirty.

Table 5.51 Perceptions of Patients on the Cleanliness of Hospital B

Place	Excellent	Good	Fair	Bad	Very bad
In the hospital building	-	9 (60)	6 (40)	-	-
Surrounding areas	-	7 (46.7)	8 (53.3)	-	-
Toilet	-	7 (50)	2 (14.3)	4 (28.6)	1 (7.1)

Many patients thought that they had continuity of care from Hospital B. Most patients (71.4 percent) identified the continuity of getting drugs as good, 28.6 percent as fair (see Table 5.52). Two-thirds of the patients (66.7 percent) considered the continuity of doctor's visits as good, while one-third judged it as fair. Most of the patients (73.3 percent) were impressed with the doctor's efforts to solve their problems. However, 6.7 percent of the patients thought that they were bad.

Table 5.52 Perceptions of Patients on the Continuity of Care in Hospital B

Type of continuity	Excellent	Good	Fair	Bad	Very bad
Continuity in getting drugs	-	10 (71.4)	4 (28.6)	-	-
Regularity of doctor's visits	-	8 (66.7)	4 (33.3)	-	-
Doctor's efforts to solve patient's problems	-	11 (73.3)	3 (20)	1 (6.7)	-

Regarding information on their treatment, most of the patients (80 percent) believed they were given sufficient information for a good understanding on how to look after themselves (see Table 5.53). Regarding their treatment, 73.3 percent of patients said they were given enough information and had acquired a good understanding about their treatment. Almost half of the patients felt they did not get enough information and understanding about the laboratory results (46.6 percent) and their illness (40 percent).

Table 5.53 Perceptions of Patients on the Information Acquired from Hospital B

Information	No explanation	Explained but seldom understood	Explained and understood well
Laboratory result	2 (13)	5 (33.3)	8 (53.3)
Illness	2 (13.3)	4 (26.7)	9 (60)
How to take care of themselves	2 (13.3)	1 (6.7)	12 (80)
Treatment	2 (13.3)	2 (13.3)	11 (73.3)

The patients were generally impressed with the services in Hospital B. The categories that were viewed as good by the patients were overall services (85.7 percent), manner of staff (85.7 percent), staff collaboration (73.3 percent), and reception for patients' relatives (69.2 percent) (see Table 5.54). However, a few patients did view some

performance as bad. These views related to emergency care (20 percent), staff collaboration (6.7 percent) and overall service quality (7.1 percent).

Table 5.54 Perceptions of Patients on the Quality of Services in Hospital B.

Type	Excellent	Good	Fair	Bad	Very bad
Staff collaboration	-	11 (73.3)	3 (20)	1 (6.7)	-
Emergency care	-	7 (70)	1 (10)	2 (20)	-
Prevention of complications	-	7 (63.6)	4 (36.4)	-	-
Staff's manner	-	12 (85.7)	2 (14.3)	-	-
Reception for relatives	-	9 (69.2)	4 (30.8)	-	-
Overall service quality	-	12 (85.7)	1 (7.1)	1 (7.1)	-

The level of participation by patients in decision making about their illness was not seen as high. Most patients (66.7 percent) identified their participation in decisions on examination or operation as low (see Table 5.55). Level of participation by patients in decision-making on present and future treatment was viewed as average (53.3 percent) and low (26.7 percent). Most of the patients thought they got appropriate laboratory tests in Hospital B, whereas 20 percent wanted to have more laboratory tests.

Table 5.55 Perceptions of Patients on Participation in Decision-making on their Health

Type	Very much	Much	Average	Low	Very low
Participation in present and future treatment	-	3 (20)	8 (53.3)	4 (26.7)	-
Participation in decisions on examination or operation	-	3 (20)	2 (13.3)	10 (66.7)	-

Patients wanted Hospital B to make improvements in many areas. Sixty percent of the patients wanted more beds in the in-patient unit. Fifty percent identified the need for more doctors in the hospital while 30 percent wanted faster service (see Table 5.56). Other recommendations were to reduce overcrowding of patients in the hospital, employ more surgeons, provided better services, get more equipment, improve the manner of some staff and ensure cleaner toilets.

Table 5.56 Improvements to Hospital B Identified by Patients

Improvement	Percentage
Increase number of beds	60
More doctors	50
Faster services	30
Reduce overcrowding of patients	10
Better services	10
Improve manner of some staff	10
More equipment	10
Cleanliness of toilets	10

Conclusion: Hospital B

Hospital B was a 30-beds hospital with a total of 52 staff working in the hospital. There was an average of 277 patients each day for out-patient services. As the staff working on morning shift numbered only 20 persons, there were delays in dealing with patients leading to overcrowding. Most patients had to spend at least half a day waiting for services in Hospital B. In some instances they had to use the whole day to obtain treatment. Some patients did complain about the long waiting time in Hospital B. The reason patients came to Hospital B for services was not its quality but because it was located near their homes and was a condition of their health insurance. The staff's major complaint was about the top administrator's management style. Staff wanted more participation and transparency in decision making. The hospital was also seen by staff to

have inadequate equipment. There was a conflict of attitudes between medical staff and the director. Medical staff wanted more modern equipment to give better service to patients, especially patients in critical condition. The director, who was also a general practitioner wanted to give only primary to secondary service. Medical staff believed there was inadequate modern equipment. The specialist doctor had to refer critical cases to the regional hospital in the city, 40 kilometres away. He could have given some treatment if the hospital had better equipment. The modern equipment was not necessary in the director's view. He was more concerned with the new building for patients who could pay for rooms. Many staff complained that only some units got what they needed. For example, staff frequently identified the health promotion unit as getting its requests. The head of this unit was seen by staff as getting along very well with the director. The relationship between the director and majority of staff was viewed as a major problem by staff. Staff cited this as a reason for lack of motivation and inspiration. However, the overall quality of the service was judged by staff and patients to be adequate. One patient who blamed the hospital for the death of his father regarded the service as bad. However, he still had to get services from the hospital since it was near his home. Many patients thought the hospital was performing better than previously, and indicated their willingness to return for service.

Hospital C

Hospital C is a regional hospital located in the centre of a northeastern province with a population of 1,780,483 in 1997. There were 917,627 men and 862,856 women. The province where Hospital C was located was comprised of twenty districts, five *ging-amphoes* (will be upgraded to be district), 198 tambons, 1,993 villages, four municipalities and 27 sanitary municipalities. The major occupation of the people was agriculture with rice, cassava, and sugarcane as the main crops. There were a few big factories in the province; for example, two fishing net factories, a shoe factory, a pulp and paper factory, and three sugar refineries. There were various health facilities both under the Ministry of Public Health (MoPH) and other ministries in this province. Under the MoPH, there were the provincial health office, nineteen community hospitals, and 236 health centres. There were a university hospital (781 beds), a military hospital (30

beds) and four municipal health centres. There were also eight private hospitals ranked from 10 to 200 beds, and 486 health service clinics.

Hospital C started services on 1 January 1951 with 25 bed-capacity and two doctors to run the hospital. In 1997, the hospital had 27 patient wards with 638 beds. It occupied the area of 49 *Rai* two *Ngan* (about 20 acres). Hospital C mandates were to service, examine, diagnose, treat and rehabilitate at the tertiary level of care the people in its province and nearby provinces. Hospital C was also a place for medical, nursing and other health science students to practice for their clinical experiences. Hospital C had stated its management policies in three areas: general public health administration, human resource management and public health system management development. The general public health administration policies included decentralisation and staff participation in administration. These policies aimed at system improvement towards efficiency and flexibility; reduction of unnecessary procedures and regulations; control and monitoring of the budget; the setting of appropriate hospital regulations; and improvement of the hospital's atmosphere. The area of human resource management focused on leadership; leader's capability in management; using moral system promotion, motivation and welfare in management; and working towards the progress of the hospital. In the area of health administration system management, Hospital C focused on pro-active measures in providing health services involving health promotion and prevention. It emphasised quality assurance; providing 24-hours services; being patient friendly; not overcrowding facilities; a one-tier standard treatment for all persons; services oriented to the achievement of the goals of 'Health For All'; and special emphasis on controlling some major health problems such as AIDS, accidents, environmental health, and food and drug consumer protection. Another main policy was preparation to join the national health care reform.

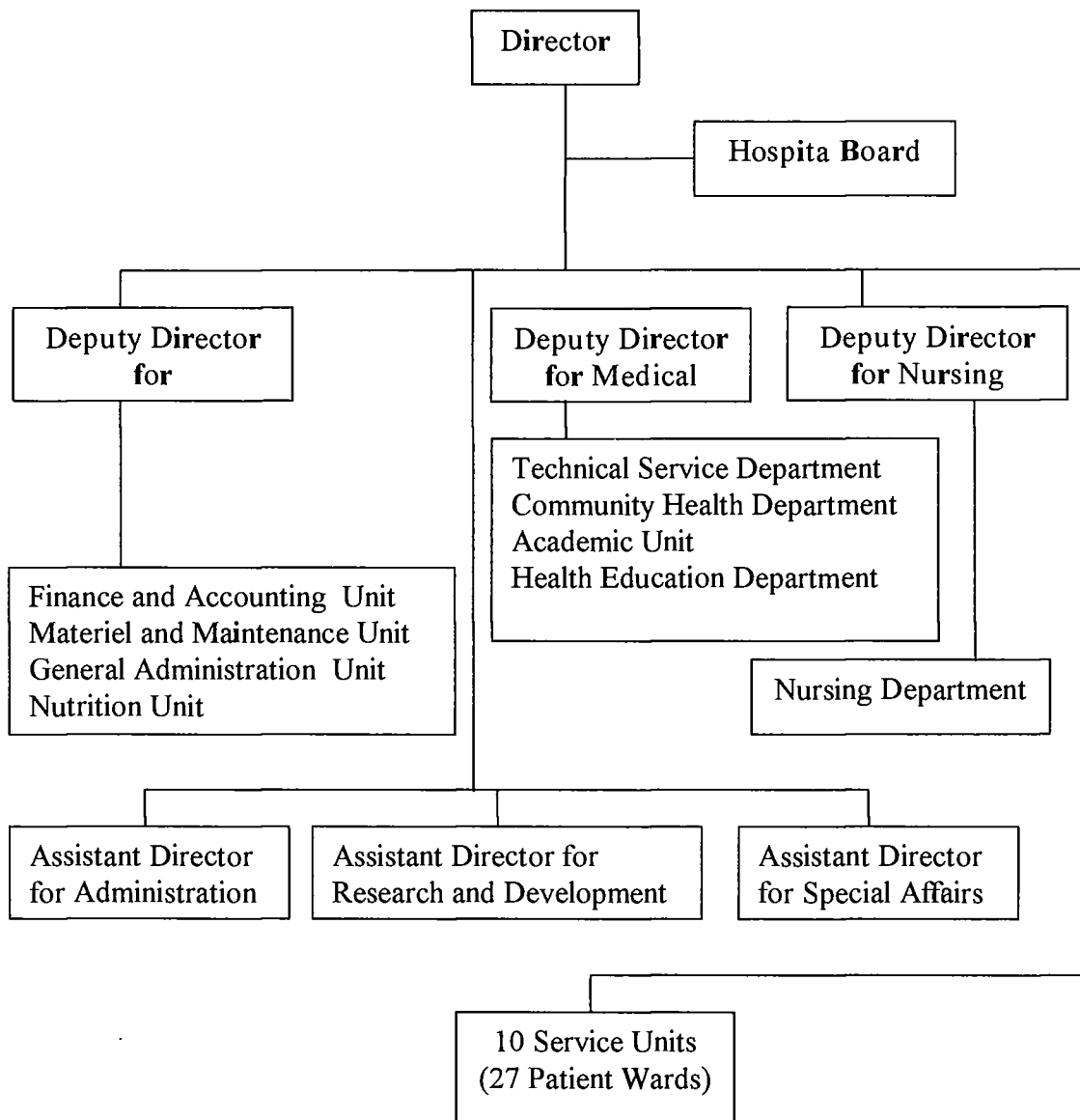
Administration

Hospital C's organisational structure is shown in Figure 5.4. The administration of Hospital C was under the supervision of a hospital board which comprised the director as the chairperson, the deputy director for medical service as vice chairperson, other

deputy directors, assistant directors and representatives from each unit as board members.

In 1997, there were 34 members on the hospital board. There were three deputy directors: deputy director for administration, deputy director for medical services and deputy director for the nursing department. The deputy director for administration looked after the financial and accounting unit, materiel and maintenance unit, general administration unit and nutrition unit. The nursing department deputy director looked after professional nurses, technical nurses, nurse aides, and workers such as cleaners and janitors. The central supply unit was also under the supervision of the nursing deputy director. The deputy director for medical services managed the technical service department, community health department, and the academic and health education units. In addition, there were three assistant directors appointed to help the director: assistant director for administration, assistant director for research and development, and assistant director for social affairs.

Figure 5.4 Hospital C's Organisational Structure



Administration

Hospital C divided its services into 10 units. First was the surgery unit, composed of operation services, intensive care, general surgery, urological surgery and plastic surgery. The surgery unit had seven wards; including the female general surgery ward, male general surgery ward, two accident wards, a urological surgery ward, a surgical intensive care ward and an accident intensive care ward. This unit provided both therapeutic and diagnostic service to patients. It used many new technologies and equipment such as endoscopic service. Hospital C also had Extracorporeal Shock Wave Lithotripsy

(ESWL). This ESWL could service about 90-100 patients per month and could perform 80-90 operations per month.

The medical unit was composed of four wards: a male medical ward (infectious), a male medical ward (non infectious), a female medical ward and a medical intensive care ward. It gave both curative and preventive service both during and outside office hours. The obstetric and gynaecology unit provided prenatal care, family planning, labour operation, in and out-patient services, and a special clinic. This unit was composed of five wards: an obstetric ward, a gynaecology ward, labour rooms, operation rooms and a special ward. The ante-natal care section serviced 2,741 mothers with total of 18,045 hospital visits in 1996. There were 3,167 babies born here in the same year. The paediatric unit had five wards: the paediatric wards 1, 2 and 3, the paediatric intensive care ward, and the newborn (aged less than 1 month) ward. This unit also serviced patients aged 0-15 years for all diseases. The orthopaedic unit had five wards: a children and female orthopaedic ward, two male orthopedic wards, a special ward and an intensive care ward. In 1998, Hospital C started orthopaedic operations out of normal office hours to reduce the long waiting list.

The dental unit had both a general dental section and a specialised dental section. They provided services both during and outside office hours. The dental services were also taken to communities and school. The services in school and communities included tooth extraction, filling, removal of plaque and dental health education. The eye unit provided diagnosis, treatment and operations for clients during office hours. However, the eye unit's emergency services were available to the public at all times. The unit had one ward with 30 beds and five special rooms. This unit had new and high technology equipment such as phaco-emulcification (for removing cataracts with ultrasonic equipment), laser treatment and vitrectomy. The ears nose and throat unit had in-patient, out-patient, operation and hearing examination sections. Its services covered ears nose and throat problems, hearing disorders and speech training. It also supplied hearing aids for patients with hearing disorders. The radiation unit had modern x-ray equipment, ultrasound and computerised thermograph. The unit provided services both in the

diagnostic and treatment areas. The unit also had mobile clinics to perform physical checks for the public.

The physical therapy unit was composed of three sections: physiotherapy, occupational therapy and prosthetics. The nutrition unit looked after catering services in the hospital. The pharmacy unit was divided into three sections: administration and equipment storage, pharmaceutical services and pharmaceutical production. In 1997, Hospital C produced disinfectant, normal saline solution and some general drugs for its own consumption. The hospital had recently established a cytotoxic pharmacy service to prepare cytotoxic drugs (drugs for cancer) for this hospital and other hospitals' usage. The health education unit gave health services in the hospital, in communities, and in schools. The unit produced health education media and ran health education campaigns, conducted health education and undertook health behaviour research. The health education unit also trained and supported training both in Hospital C and other hospitals. The social medical unit looked after community health services, health promotion, disease prevention and control, epidemiology, occupational health and social welfare. The patho-anatomy unit looked after tissue and cell examination, serology and forensic examination. The unit had started to use immunoperoxidase to mark tumours thus making its diagnosis more accurate. The clinical pathological unit had several services such as haematology, microbiology, immunology, a chemical clinic and the blood bank. This unit emphasised teamwork. Its staff had been trained in Total Quality Management (TQM) and organisational development (OD) to improve the unit's efficiency. This unit also used modern technology such as equipment for automatic cell cleansing, automatic complete blood count and automatic blood culture. Such high technology equipment helped increase the unit's efficiency by reducing the time taken for procedures and lowering the risk of infection. The unit focused on client satisfaction by starting the out-patient service at 7.30 am, and operating a mobile blood bank during and out of office hours. This unit also collected specimens both in and outside the hospital.

The accident and forensic unit had various activities: emergency care, wound care, observation, resuscitation, treatment via radio and radio network, and stretcher services to other units. This unit provided daily and 24 hours service. Hospital C's accident unit

played a leading role in accident management in the province. The out-patient unit was composed of seven sections: patient screening, public relations, general physical examination, wound care and injection, counselling, special diseases check up and an echocardiogram section.

The nursing unit was under the deputy director for nursing with each nursing section having a head and deputy head. The nursing unit managed nine sections: intensive care, in-patient, out-patient, operation rooms, accident and emergency, delivery rooms, supply section, cleaning section and the infectious control section. This unit's other major roles were human resources development, staff allocation, building maintenance, equipment allocation, and supporting the health policy of the hospital and province.

Hospital C used computers in various units and functions. In 1995, the registration room, emergency section, surgical unit and general physical examination unit started using computerized registration. There were two servers, 52-computer workstations and 27 printers. There were three systems analysis staff, three programmers and eight staff who maintained the system. There were 200 staff using the computerised system.

Out of the total of 638 beds in Hospital C, there were 191 beds in surgical wards, 106 in paediatric wards, 100 in medical wards and 95 in orthopaedic wards (see Table 5.57). There were 54 beds distributed between four special wards in which patients had to pay a room fee and for other accessories such as television and air conditioning. Hospital C had 32 beds in various intensive care units and eleven operation rooms. Intensive care units were not separate from ordinary wards.

Table 5.57 Ward and Bed Capacity of Hospital C, 1997

Ward	Number of wards			Number of beds		
	Ordinary	Special	Total	Ordinary	Special	Total
Medicine(male-female)	4	-	4	100	-	100
Surgery (male-female)	6	1	7	173	18	191
Orthopaedic	3	-	-	95	-	95
Eyes Ears Nose Throat	1	1	2	30	5	35
Obstetric	1	-	1	22	-	22
Gynaecology	1	1	2	30	5	35
Paediatric	3	1	4	98	8	106
Special ward 1	-	1	1	3	6	9
Special ward 2	-	1	1	3	12	15
Special ward 3	-	1	1	3	12	15
Special ward 4	-	1	1	3	12	15
Total	19	8	27	560	78	638

Other wards

Ward	Rooms	Beds
ICU, Surgery	1	8
ICU, Medicine	1	8
ICU, Padiatric	1	8
ICU, Neuro-surgery	1	8
Ward	Rooms	Beds
Operation room	11	11
X-ray	6	6
Labour rooms	1	3
Waiting room for delivery	1	5
Nursery	1	17
Observation room	1	10
Total	24	84

The hospital board was responsible for the hospital administration. Hospital C's director had the executive authority to make all senior appointments such as the deputy director for the nursing department, and assistant directors in all sectors. These appointments were based on duty, responsibility and ability of staff. Hospital C used some private sector services to improve efficiency such as contracting out the cleaning services in many buildings. The maintenance of special equipment such as lithotripsy, computerized thermograph and elevators was contracted out.

The hospital had experienced problems of collecting fees from patients and insurance schemes. Therefore, Hospital C had established a health insurance office to address these problems. The hospital also improved external and internal communication by installing an automatic telephone system with 50 different numbers. The information system had been improved through computerisation. Relatives of patients could report patient deaths 24 hours in this hospital instead of the normal practice which involved reporting at the municipality.

Personnel

Hospital C had 1,569 staff in 1997 (see Table 5.58). There were 448 professional and technical nurses (28.6 percent), 94 doctors (6.0 percent), 23 pharmacists (1.5 percent) and 8 dentists (0.5 percent). Other staff and temporary staff made up 62.8 percent of the total staff.

Table 5.58 Hospital C's Staff, 1997

Staff	Number	Percent
Doctor	94	6.0
Dentist	8	0.5
Pharmacist	23	1.5
Professional and technical nurses	448	28.6
Financial and accounting staff	10	0.6
Other staff and temporary staff	986	62.8
Total	1569	100

Budget

Hospital C's budget was divided into two categories, the government budget and the revenue generated by the hospital. Hospital C's government budget in 1997 was 295,035,916 Baht (see Table 5.59). Most of the budget was for providing health services to people in the province (47.8 percent), hospital buildings (38.1 percent), and training doctors for work in rural communities (6.7 percent).

Table 5.59 Hospital C's Government Budget, 1997

Activities/ Programme	Amount (Baht)	Percent
- Provincial health service	141,065,666	47.8
- Medical equipment	9,450,000	3.2
- To build hospital building (continued from 1994)	34,800,000	11.8
- To build hospital building (continued from 1995)	19,700,000	6.7
- To build hospital building (continued from 1995)	30,792,000	10.4
- To build a ward for AIDS patient	27,054,000	9.2
- Human resource management	200,000	0.1
- Health care for AIDS patients	3,200,000	1.8
- Medical and emergency care	6,193,250	2.1
- Medical care for accident patients	120,000	0.04
- Rehabilitation	2,613,000	0.9
- Producing doctors for rural service	19,650,000	6.7
- Human resource development	160,000	0.1
- Consumer protection	38,000	0.01
Total	295,035,916	100

In 1997, 534,298,049.62 Baht of government budget was used by Hospital C (see Table 5.60). Most of the budget was spent for staff salary (29.13 percent), land and construction (24.52 percent), and direct expense (15.66 percent). The figures show that expenditure for the government budget was higher than the amount it was allocated in 1997 (Table 5.59). The additional expenditures were funded from unspent amounts from the previous year.

Table 5.60 Hospital C's Expenditure for Government Budget, 1997

Expenditure	Amount (Baht)	Percent
Salary	155,615,902.10	29.13
Direct expense from central budget	83,646,231.52	15.66
Honorarium and material	43,111,750.00	8.07
Utility cost	12,044,000.00	2.25
Equipment	45,296,750.00	8.48
Land and building	130,996,000.00	24.52
Service for the poor	57,080,000.00	10.68
Subsidy fund	6,507,416.00	1.22
Total	534,298,049.62	100

Furthermore Hospital C had 48,166,510.19 Baht of self-generated revenue left from 1996 plus 186,385,495.16 Baht of self-generated revenue from 1997 giving a total of 234,552,005.35 Baht (see Table 5.61). This revenue derived from selling drugs including drugs for out-patients (9.54 percent), in-patients (9.36 percent) and hospital staff (3.07 percent). Medical service fees of in-patients accounted for 18.70 percent of the revenue whereas medical service fees paid by health card schemes gave 18.65 percent. Fees collected from patients covered by the Traffic Liability Act amounted 8.78 percent of total self-generated revenue.

Table 5.61 Income from Hospital C's Self-generated Revenue

Source of Generated Revenue	Amount (Baht)	Percent
Drug fees	7,788,638.65	9.54
Medical service fees	23,230,146.27	12.46
Laboratory fees	1,852,083.12	0.99
X-ray fees	2,178,902.00	1.17
Dental service fees	798,908.00	0.43
Drug fees of in-patients	17,454,139.00	9.36
Room fees of out-patients	9,449,500.00	5.07
Meals for in-patients	4,021,135.00	2.16
Medical care fees of in-patients	7,142,627.00	18.70
Medical service fees collected from patients covered by civil servant and state enterprise schemes.	7,142,627.00	3.83
Drug fees of hospital staff	5,727,731.00	3.07
Medical care fees of patients covered by the Traffic Liability Act	16,357,544.54	8.78
Medical care fees of patients using health card scheme	34,756,128.77	18.65
Physical examination fees	1,799,449.00	0.97
Donations	100,739.80	0.05
Budget from social security fund	4,512,841.20	2.42
Interest from bank deposits	1,408,381.70	0.76
Other income	2,959,553.11	1.59
Total	186,385,495.16	100

The hospital generated revenue was used mainly for staff wages (49.06 percent), direct expenses (20.68 percent), and materials (10.67 percent) (see Table 5.62). The total expenses paid for from self generated revenue was 186,401,696.65 Baht. There were 48,150,308.70 Baht left for 1998.

Table 5.62 Expenditures from Hospital C Self-generated Revenue

Expense	Amount (Baht)	Percent
Wage	91,446,816.85	49.06
Honoraria	14,050,199.07	7.54
Direct expenses	38,541,006.75	20.68
Material	19,892,016.21	10.67
Equipment	8,464.63	0.00
Utilities	16,167,307.00	8.67
Other expenses	6,295,886.14	3.38
Total	186,401,696.65	100

Activities

In 1997, 95,857 new patients and 190,142 old patients received services from the out-patient unit. There was an average of 1,335 patients per day obtaining services from Hospital C (see Table 5.61). Some of these patients visited Hospital C more than one time. Therefore, the total of out-patients' visits was 381,677. Most of the patients used services in the medicine (17.2 percent), surgery (16.3 percent), general practice (GP) (13.3 percent), obstetric-gynaecology (11.6 percent) and paediatric units (11.5 percent).

Table 5.63 Patients in Out-patient Unit of Hospital C, 1997

Unit	Number	Percent
Surgery	62,061	16.3
Orthopaedic	20,108	5.3
Medicine	65,668	17.2
Paediatric	44,135	11.5
Obstetric-gynaecology	44,351	11.6
Ears nose throat	12,477	3.3
Eye	22,417	5.9
Dental	16,630	4.4
Physiotherapy	25,974	6.8
General practice	50,952	13.3
Other	16,904	4.4
Total	381,677	100
Average patients per day	1,335	

In-patients

In 1997, there were 44,436 patients admitted to Hospital C's wards (see Table 5.64). The total admission days was 286,048 with the average of 784 in-patients per day. The average length of stay was 6.4 days. The bed occupancy rate was 119 percent. It was normal in some wards, such as the medical and surgical wards, to have two patients in one bed or patients in stretchers in the wards' corridors.

Table 5.64 In-patient Statistics of Hospital C, 1997

In-patients	Number
Total in-patients	44,436
Total admission days	286,048
Average patients per day	784
Bed occupancy rate (percent)	119
Average patient stay (days)	6.43
Deaths	2,124
Death rate (percent)	4.78

In 1997, 12,150 patients were admitted to surgery wards (27.3 percent), 9,259 patients to obstetric-gynaecology wards (20.8 percent), 9,122 patients to medical wards (20.5 percent) and 6,142 patients to paediatric wards (13.8 percent) (see Table 5.65). Fewer patients were admitted because of eyes (3.8 percent), ears nose throat (2.2 percent), and dental (0.2 percent) problems.

Table 5.65 In-patients in Units of Hospital C, 1997

Unit	Number	Percent
Surgery	12,150	27.3
Orthopaedic	4,995	11.2
Medicine	9,122	20.5
Paediatric	6,142	13.8
Obstetric-gyneacology	9,259	20.8
Ears nose throat	990	2.2
Eyes	1,678	3.8
Dental	100	0.2
Total	44,436	100

In 1997, Hospital C received 30,578 patients from other hospitals (see Table 5.66). This was because Hospital C was a regional hospital which had modern equipment and expertise for various health problems. Therefore, hospitals at secondary level (provincial or community hospitals) usually referred severe patients to Hospital C. Patients who were referred to Hospital C through this channel still maintained their insurance rights, such as health cards or the insurance schemes for the poor, old people and children. Hospital C referred 71 patients to other hospitals. Some of these referrals were to hospitals near their homes, some to the university hospital for some special treatment, others to private hospitals and some to hospitals in Bangkok.

Table 5. 66 Referral Patients and Hospital C

Referral patients	Number
Patients referred from other hospitals	30,578
Patients referred to other hospitals	71

In 1997, there were 17,816 accident patients who received services in Hospital C. There were 21,318 operations performed in Hospital C.

Academic Functions

Hospital C was the centre for field practice for health science students and personnel of more than ten Thai institutions and three foreign institutes. It also functioned as a clinical medical study centre and collaborated with other health institution both in training and research. Hospital C allocated 1.2 million Baht annually for research. There were various activities to support research including research methodology training and training on statistics, and there was a research and development committee. In 1995, 23 research projects were completed and three of them were classified as 'outstanding'. In 1996, fifteen research projects were completed with four being graded as 'outstanding'. In relation to training, Hospital C was the training institute for health personnel especially from Khon Kaen University. These included students of medicine, dentistry and nursing as well as qualified doctors, dentists and pharmacists. Hospital C contributed

to teaching on foreign programmes such as the Diploma in Tropical Medicine and Hygiene, and the Master of Tropical Paediatrics of the Liverpool School of Tropical Medicine and the Diploma in Tropical Medicine of the Austrian Society of Tropical Medicine and Parasitology. Hospital C also helped to train nursing students for the Borumraichonanee College and the Sirindorn Public Health College. The staff of Hospital C were used as resource persons for training. The hospital also organised training for its own staff and for staff of its hospital network.

Service Quality Improvement

The first measure Hospital C used to improve quality of service is Hah So, a Thai method for quality improvement. Hah Sor were used in Hospital C for quality improvement in early 90s. Har sor emphasised cleanliness, convenience and orderliness of the workplace. In 1995, with the support of the Ministry of Public Health, Hospital C started using Total Quality Management (TQM) to improve its service quality. The hospital organised a seminar to disseminate the TQM philosophy and principles to key personnel and vowed to give freedom to each section for self-development. Hospital C established two committees, the quality development administration committee and the strategic and operational planning development committee to conduct quality improvement. It also established the Total Quality Management Centre to support its activities. Staff who were trained in TQM and organisation development ran the centre. The hospital had identified its goals and had organised training on human resource development and organisational analysis. It also emphasised quality control (QC) and continuous quality improvement (CQI) in the hospital. Hospital C also developed operational plans, a training plan and a public relations plan. Some units in Hospital C, such as the laboratory, surgery, pharmacy and stretcher service, were advanced in quality improvement. However, there was still lack of understanding among some staff about the principles of TQM.

Human Resource Development

Hospital C used training as one means for human resource development. In 1995, Hospital C organised two training programmes on human resource management for outstanding health service. In 1996, Hospital C organised training on organisational

development (OD) for staff at all levels. It spent 1 million Baht for 300 staff in three training groups. In 1996, training was developed on 'people agency responsibility knowledge' (PARK) for 408 staff in eight training programmes. The total budget for this training was 370,800 Baht. This training focused on teamwork and problem solving both at the work place and on family matters. Hospital C also emphasised continuing study for lower level staff to improve their capability, supported staff in joining government programmes and ran short course training. Hospital C also sent its outstanding staff for overseas study trips such as to Singapore and Kunming (China). It had already sent 24 staff to these two countries.

Hospital C had undergone Hospital Accreditation (HA). This was a quality assurance programme which guaranteed the quality of service. The hospital organised seminars on HA, established its HA committee, and sent some staff to train in this area to help the program for HA. The HA activities were voluntary. It was not compulsory for units to join the programme. It started with only a few units such as the surgery unit, the equipment maintenance unit and the supply unit. The HA initiative focused on guaranteeing that proper procedures were followed. Experts from the Ministry of Public Health and Canada helped develop staff skills to conduct HA. Many hospital units had not yet joined the programme at the time of this study.

Hospital C also volunteered to be a pilot hospital in a programme which prepared government hospitals to become autonomous hospitals. An autonomous hospital is an institution constituted under the Public Organisation Act (POA) and accountable to the community. It has the following characteristics: a juridical entity, capable of suing and being sued, and with the authority to enter into contractual relationships; operating under state supervision; primarily responsible for curative care, but also providing preventive and promotive health services; financed by state subsidies; with physical assets purchased by government funds; owned by the Ministry of Public Health (MoPH); but not under the direct day-to-day control of the MoPH; full-time, part-time, and casual staff are either; a) autonomous hospital employees, b) civil servants on secondment to the autonomous hospital, or c) full civil servants during the transitional phase; responsible to the MoPH for adhering to the appropriate functions defined for autonomous public

hospitals as parts of a coherent Thai health services system; meeting basic minimum standards for its technical and administrative functions; operating under a general memorandum of administrative agreement defining the operational relationship between the MoPH and the autonomous hospital; financed through a system of vertical block grants and/or transfers from the MoPH and locally generated revenue (in that order of importance); with clear and transparent lines of authority both within the hospital and between the hospital and the provincial health board; able to retain financial surpluses within limits set by the MoPH; fully responsible for all hospital resources; openly and transparently accountable for all resources regardless of source; and governed by a governing committee (GC) and run by chief executive officer (CEO).

Autonomous hospitals were created as an attempt to improve communication and reduce administrative complexity, thereby improving government's responsiveness to local health needs. Becoming autonomous hospital is also seen to increase effectiveness and efficiency of management by allowing greater discretion to the hospital. Improving resource mobilisation for national and local development policies, and improving local knowledge of development priorities are identified as further advantages. Political objectives such as self-reliance, self-determination, democratisation and involving the community in hospital government are also seen as benefits of autonomous hospitals. At the time of this study, Hospital C was in the process of educating staff and community for their participation in the autonomous hospital project.

Staff Perceptions

Seventy-nine staff responded to the questionnaire. Most of them were female (84.8 percent). Their ages ranked between 23 and 54 years old with the average of 36.7 years. More than half (60.8 percent) of the staff were married. Many of the respondents (43 percent) had finished bachelor degrees, diplomas (30 percent) and post graduate degrees (19 percent). The respondents had finished their degrees between 1 and 30 years ago with the median of 12.5 years ($SD = 7.437$). These respondents were from all types of staff in Hospital C including professional nurses (41.8 percent), technical nurses (13.9 percent), doctors (10.1 percent), and technicians and physiotherapists (10.1 percent).

They had been working at the hospital from 1 to 32 years with the median of 13 years (SD = 8.072). Their salaries ranged from 4,100 to 31,430 Baht per month with the average of 12,917.95 Baht. They received extra income ranging from 200 to 18,000 Baht per month with the median of 2,000 Baht (SD = 3370.78). This extra income was from working overtime and in mobile clinics while doctors could get 10,000 Baht per month from the MoPH for not working in private clinics or hospitals. The respondents identified that they worked 35 to 64 hours per week with an average of 43.85 hours.

When asked the reasons staff liked working in the hospital, almost all respondents answered because they served the community (92.4 percent) (see Table 5.67). The next most popular answer was that their work gave them good social status (68.4 percent), followed by good salary (60.3 percent), and freedom in their profession (58.2 percent). Freedom in their profession means staff are allowed to practice or give service in order to solve patients' problems with minimal restrictions, such as cost, from their hospitals.

Table 5.67 Reasons Staff Like Working in Hospital C

Reason	Number of respondents	Percent
Serve the community	73	92.4
Social status	54	68.4
Good salary	47	60.3
Freedom in their profession	46	58.2
Good opportunity for their future	23	29.1
Other	6	7.6

Hospital C's staff believed that the most common factors attracting patients were cheap fees (81 percent), good quality staff (78.5 percent), modern equipment (73.1 percent) and good services (70.9 percent) (see Table 5.68). Thirty-two percent of staff thought patients attended this hospital because it gave quick services.

Table 5.68 Perceptions of Hospital C's Staff on Factors Attracting Patients to Hospital C

Reason	Number	Percent
Cheap fees	64	81.0
Good quality staff	62	78.5
Modern equipment	57	73.1
Good services	56	70.9
Quick services	25	31.6
Others	4	5.1

According to the staff opinion, there were inadequate numbers of all types of staff except administrators. Most staff (87.3 percent) identified a shortage of professional nurses, followed by specialised doctors (70.9 percent), and general doctors and technicians (both 65.8 percent) (see Table 5.69).

Table 5.69 Perceptions of Hospital C's Staff on Adequacy of Staff

Type	Adequate		Inadequate	
	Number	Percent	Number	Percent
Administrator	59	74.7	20	25.3
General doctor	27	34.2	52	65.8
Specialised doctor	23	29.1	56	70.9
Professional nurse	10	12.7	69	87.3
Technical nurse	29	37.2	49	62.8
Technician	27	34.2	52	65.8
Supporting staff	34	45.3	41	54.9

Most staff (83.6 percent) viewed the specialised doctors as good and excellent (see Table 5.70). Strong positive ranking also applied to professional nurses (77.2 percent), administrators (70.9 percent) and general doctors (67.1 percent). More than half of the

staff thought that technicians (64.1 percent), technical nurses (60.3 percent) and supporting staff (58.4 percent) were good and excellent. None of the staff thought professional nurses as bad or very bad. Less than 6 percent of staff thought that other types of staff were bad. Administrator was the only category identified as very bad, but by only one person.

Table 5.70 Perceptions of Hospital C's staff on Quality of Staff

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	4 (5.1)	52 (65.8)	19 (24.1)	3 (3.8)	1 (1.3)
General doctor	3 (3.8)	50 (63.3)	23 (29.1)	3 (3.8)	-
Specialised doctor	7 (8.9)	59 (74.7)	12 (15.2)	1 (1.3)	-
Professional nurse	6 (7.6)	55 (69.6)	18 (22.8)	-	-
Technical nurse	1 (1.3)	46 (59.0)	27 (34.6)	4 (5.1)	-
Technician	1 (1.3)	49 (62.8)	27 (34.6)	1 (1.3)	-
Supporting staff	1 (1.3)	44 (57.1)	28 (36.4)	4 (5.1)	-

Almost all staff (91.1 percent) believed that the patients saw Hospital C as overcrowded with too many patients seeking services (see Table 5.71). About 78 percent of the staff thought there were not enough beds for in-patients and 49.4 percent of the staff thought the patients received very slow service. Only one member of staff mentioned expensive fees as a perceived problem for patients.

Table 5.71 Perceptions of Staff on Patients' Problems in Getting Services in Hospital C

Problems	Number	Percent
Too many patients (overcrowded)	72	91.1
Not enough in-patient beds	62	78.5
Very slow service	39	49.4
Expensive fees	1	1.3
Other	3	3.8

Hospital C staff thought the hospital needed to improve in many areas. Some saw the need to upgrade service quality to meet national and international standards (40.8 percent), and mentioned the ISO 9002 quality process. Other perceived problems included the environment surrounding the hospital buildings (38.2 percent), and the need for more staff especially doctors and nurses (28.9 percent) (see Table 5.72). Twenty-five percent of staff wanted better welfare, such as housing, while 15.8 percent wished to see improvement in administration. They wanted the administrator to be more open, more participation of staff in administration, and the administrator to support their quality management project and run the hospital to enhance its competitiveness with other hospitals. Thirteen percent of staff mentioned the hospital needed more modern equipment, and 9.2 percent wanted moral improvement among staff.

Table 5.72 Perceptions of Staff on Problems in Hospital C Which Needed Improvement

Problem	Number	Percent
Services	31	40.8
Environment	29	38.2
Inadequate staff	22	28.9
Staff welfare	19	25.0
Administration system	12	15.8
Modern equipment	10	13.2
Staff morality	9	9.2
Expansion of the hospital	4	5.3
Others	7	9.1

Patient Perceptions

Forty-five patients responded to the questionnaire. Just over half of them (55.7 percent) were in the out-patient department while the other 44.3 percent were from the in-patient wards. Just over half of the respondents were female (53.3 percent), aged from 17-65 years old with the average age of 42.3 years. Most of the patients (77.8 percent) lived in

the province in which the hospital was located. The rest, 22.2 percent, were from other province. Some of the patients had to travel as far as 300 kilometres to reach the hospital. Most of the patients (66.7 percent) had finished only primary education while 24.4 percent of them had finished secondary education, and only 2.2 percent had completed bachelor degrees. The most common occupational grouping among the patients was farmers and workers (44.4 percent), while 15.6 percent were housewives and 13.3 percent were merchants. Civil servants comprised 11.1 percent of patients and 8.9 percent were students.

Patients' monthly incomes ranged from 1,200 to 20,000 Baht with the median of 4,000 Baht (SD = 5124.305). Not all patients gave information about the hospital fees they paid. The lowest fee observed during this study was 80 Baht, while the highest was 50,000 Baht. Most of the patients (80 percent) had their hospital fees paid by third parties. Only 20 percent of the patients paid for their hospital fees themselves or with the help of their relatives. The most common third party which paid for the health service in Hospital C was the health card (28.9 percent) (see Table 5.73). Other third party payers included the government welfare schemes, such as for the poor and children. They accounted for 17.7 percent of the total patients. Only 11 percent of the patients used the civil servant scheme whereas 2.2 percent used the social security for workers scheme and the other 2.2 percent used the Traffic Liability Act scheme.

Table 5.73 Source of Patients' Payments for Hospital C's Fees

Patient's fee paid by	Number	Percent
Health card	13	28.9
Welfare for the elderly	1	2.2
Welfare for children 0-12 years old	3	6.7
Patients	9	20.0
Patients' relatives	9	20.0
Welfare for the poor	2	4.4
Civil service	5	11.1
Welfare for monks	2	4.4
Social security for workers	1	2.2
Traffic Liability Act scheme	1	2.2

The reasons why patients chose to get service from Hospital C were because they lived near the hospital (31.1 percent) followed by condition of their health card to get service there (28.9 percent) (Table 5.74). Good service and good medication treatment (24.4 percent) and quick service (22.7 percent) were other reasons given for selecting services from Hospital C. About 22 percent of patients were influenced to come because of the hospital's quick service, 11.1 percent were there because of the hospital's good reputation and 8.9 percent were attracted by the modern equipment.

Table 5.74 Reasons the Patients Chose to Get Services from Hospital C

Reasons	Number	Percentage
Live near the hospital	14	31.1
Condition of health card	13	28.9
Good service, good medical treatment	11	24.4
Quick service	10	22.7
Reputation of the hospital	5	11.1
Modern equipment	4	8.9

After getting services in Hospital C, most of the patients (80.9 percent) thought the adequacy of equipment in Hospital C was good or excellent, and 77.5 percent identified the use of modern equipment as good or excellent (see Table 5.75). No respondent classified the adequacy and modernity of equipment as bad and very bad.

Table 5.75 Perceptions of Patients on Equipment of Hospital C

Equipment	Excellent	Good	Fair	Bad	Very bad
Adequacy of equipment	3 (7.1)	31 (73.8)	8 (19.1)	-	-
Modernity of equipment	2 (5.0)	31 (77.5)	7(17.5)	-	-

The opinions of the patients on care given by doctors, nurses and other staff were good. Most of the patients viewed physical examination by doctors (75.6 percent), treatment by doctors (82.2 percent), nursing care (78.6 percent) and care by other staff (81.8

percent) as good (see Table 5.76). Only very few were critical of care by staff, with 2.2 percent of patients seeing the physical examination by doctors as bad and 4.6 percent viewing care given by other hospital staff as bad to very bad.

Table 5.76 Perceptions of Patients on Quality of Care by Different Types of Health Personnel in Hospital C

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	1 (2.2)	34 (75.6)	9 (20)	1 (2.2)	-
Treatment by doctor	1 (2.2)	37 (82.2)	7 (15.6)	-	-
Nursing care	1 (2.4)	33 (78.6)	8 (19)	-	-
Care by other staff	1 (2.3)	36 (81.8)	5 (11.4)	1 (2.3)	1 (2.3)

Patients had mixed feelings concerning the waiting time in Hospital C. A few (6.8 percent) thought that waiting time to see the doctor was very quick, 22.7 percent as quick and 20 percent as average (see Table 5.77). However, 11.4 percent of the patients thought it was slow while the rest (13.6 percent) thought that it was very slow. Most patients thought that waiting to pay their fees was quick (43.5 percent) and average (43.5 percent). Waiting time to get drugs was also viewed by many patients as average (46.9 percent) and quick (37.5 percent). Almost 20 percent of the patient thought that their waiting time to get drugs was slow to very slow.

Table 5.77 Perceptions of Patients on Waiting Time for Various Activities in Hospital C

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see doctor	3 (6.8)	10 (22.7)	20 (45.5)	5 (11.4)	6 (13.6)
Waiting to pay fees	-	10 (43.5)	10 (43.5)	2 (8.7)	1 (4.3)
Waiting to get drugs	-	12 (37.5)	15 (46.9)	4 (12.5)	1 (3.1)

In term of cleanliness patients thought inside the building was better than outside. Most of the patients (55.6 percent) identified the hospital buildings as clean, 42.2 percent as fair and 2.2 percent as very clean (see Table 5.78). Most of the patients (44.8 percent) thought that the areas surrounding the hospital buildings were clean, 44.2 percent said fair while 6.7 percent thought they were dirty. Most patients (54.8 percent) identified the toilets as fair, while 33.3 percent thought they were clean. However about 10 percent thought the toilets were very dirty.

Table 5.78 Perceptions of Patients on the Cleanliness of Hospital C

Area	Very clean	Clean	Fair	Dirty	Very dirty
In the buildings	1 (2.2)	25 (55.6)	19 (42.2)	-	-
Outside the building	-	21 (48.8)	19 (44.2)	3 (6.7)	-
Toilet	-	14 (33.3)	23 (54.8)	1 (2.4)	4 (9.5)

Many patients thought they had continuity of care from Hospital C. Almost all of the patients (97.4 percent) identified the continuity of getting drugs as good (see Table 5.79). There was a similar response concerning the regularity of the doctors' visits with most patients (90.3 percent) considering the continuity of doctors' visits as good. Almost all of the patients were impressed with the doctors' efforts to solve their problems with 9.3 percent identifying the doctors' efforts to solve their problem as excellent and 79.1 percent as good.

Table 5.79 Perceptions of Patients on the Continuity of Care in Hospital C

Type of continuity care	Excellent	Good	Fair	Bad	Very bad
Continuity in getting drugs	-	38 (97.4)	1 (2.6)	-	-
Regularity of doctor's visits	2 (6.5)	28 (90.3)	1 (3.2)	-	-
Doctors' efforts to solve patient's problems	4 (9.3)	34 (79.1)	5 (11.6)	-	-

Even though most patients mentioned that they had reasonable information from the hospital, many of them still had problems. While 47.5 percent of the patients said they had received explanation and good understanding on their laboratory results, 42.5 percent of the patients said that they did not get any explanation in this category (see Table 5.80). It was a similar situation regarding information about patients' illnesses, how to take care of themselves and treatment. More than 50 percent gave positive responses but significant minorities (43.2 percent, 34.1 percent and 35.6 percent) reported that they received no explanation.

Table 5.80 Perceptions of Patients on Information Acquired from Hospital C

Information	No Explanation	Explained but seldom understood	Explained and well understood
Laboratory results	17 (42.5)	4 (10)	19 (47.5)
Illnesses	19 (43.2)	2 (4.5)	23 (52.3)
How to take care of themselves	15 (34.1)	1 (2.3)	28 (63.6)
Treatment	16 (35.6)	2 (4.4)	27 (60)

The patients were generally impressed with the services in Hospital C. The majority of the patients identified the quality of services of this hospital as good. More than 90 percent of patients thought that the staff collaboration and prevention of complications in Hospital C were good (see Table 5.81). When asked about the overall service quality, 86.7 percent of the patients identified it as good and 2.2 percent thought it was excellent. However, a few patients were not satisfied with the performance. About 3 percent of patients thought that the staff collaboration, emergency care and reception for relatives were very bad. About 10 percent of patients were dissatisfied with the reception for relatives.

Table 5.81 Perceptions of Patients on the Quality of Services in Hospital C

Type	Excellent	Good	Fair	Bad	Very bad
Staff collaboration	-	41 (91)	3 (6.7)		1 (2.3)
Emergency care	2 (5.9)	26 (76.5)	4 (15.8)	1 (2.9)	1 (2.9)
Prevention of complications	-	28 (90.3)	3 (9.7)	-	-
Staff's manner	-	38 (84.4)	6 (13.3)	1 (2.2)	-
Reception for relatives	-	26 (74.3)	5 (14.3)	3 (8.6)	1 (2.8)
Overall service quality	1 (2.2)	39 (86.7)	5 (11.1)	1 (7.1)	-

More than half of the patients (61.3 percent) identified their participation in decisions on examination or operation as high while 6.5 percent thought their level of participation in this matter was very high (see Table 5.82). Almost half of the patients viewed their level of participation in decision making on present and future treatment as high (44.4 percent) to very high (2.2 percent). However, 20 percent of patients perceived that their involvement in decisions making of present and future treatment was low (15.6 percent) to very low (4.4 percent). About 15 percent of the respondents also viewed their participation in decisions on examination and operation as low to very low. Most of the patients thought they received appropriate laboratory tests in Hospital C, whereas 20 percent wanted to have more laboratory tests.

Table 5.82 Perceptions of Patients on Participation in Decision-making on their Health in Hospital C

Decision-making	Very High	High	Average	Low	Very low
Participation in present and future treatment	1 (2.2)	20 (44.4)	15 (33.3)	7 (15.6)	2 (4.4)
Participation in decisions on examination or operation	2 (6.5)	19 (61.3)	5 (16.1)	4 (12.9)	1 (3.2)

Patients wanted Hospital C to make improvements in many areas. About half of the patients (54.3 percent) wanted the hospital to reduce overcrowding of patients in the hospital and to expand car parks followed by efforts to ensure improvement in the cleanliness of hospital wards and toilets (see Table 5.83). Other improvements recommended were to provide better services, get more modern equipment and improve the manner of staff.

Table 5.83 Improvements to Hospital C Identified by Patients

Improvement	Percentage
Reduce overcrowding of patients and expand car park	54.3
Cleanliness of hospital wards and toilet	28.6
Better services	20.0
Modern equipment	14.3
Manner of staff	14.3

Conclusion: Hospital C

Hospital C was a 638-beds regional hospital with the total of 1,589 staff working in the hospital. There was an average of 1,335 patients per day seeking out-patient services and average of 784 in-patients per day. Patients were from several provinces in the Northeast for specialised care in Hospital C. Most Hospital C staff thought that factors attracting patients to their hospital were cheap fees, good quality staff, modern equipment and good services. Shortage of staff such as professional nurse, specialised and general doctors were identified by most of staff as problems which needed to be addressed. Many staff saw the need to improve service quality to meet national and international standard. Patients were generally impressed with services in Hospital C. The reasons patients chose to get services in Hospital C were not only that they lived near the hospital or that it was a condition of health insurance but also that it provided good service and good medication treatment. Patients wanted Hospital C to reduce

overcrowding of the hospital, expand the car park and improve the cleanliness of the hospital.

Hospital C volunteered to be a pilot autonomous hospital. It had implemented various quality improvement measures such as a total quality management programme. The hospital had also undergone a hospital accreditation process. Hospital C was well known nationwide as a good public hospital and as a leader for change. However, as a public hospital under the MoPH, there were a lot of obstacles to changes. The MoPH's minister appointed the director and other administrators at Hospital C. Despite being a model for change, some of the administrators did not want or support any changes. The director was not the key person for change in Hospital C. He even tried to prevent changes occurring in the hospital. Some deputy directors were the real leaders of new schemes for hospital quality improvement. However, without the director's support the quality improvement schemes could not be fully implemented. As schemes such as hospital accreditation were voluntary, lacking the director's support made accreditation harder and slower than other hospitals especially private hospitals where such quality schemes had top-level support.

Chapter Six

The Performance of Private Hospital in the Northeast of Thailand

In the previous chapter, three hospitals in the public sector were investigated. This chapter focuses attention on private hospitals. Three hospitals were examined, including a 50-beds hospital and a 100-beds hospital, both run for profit and a 250-beds not-for-profit hospital.

Hospital D

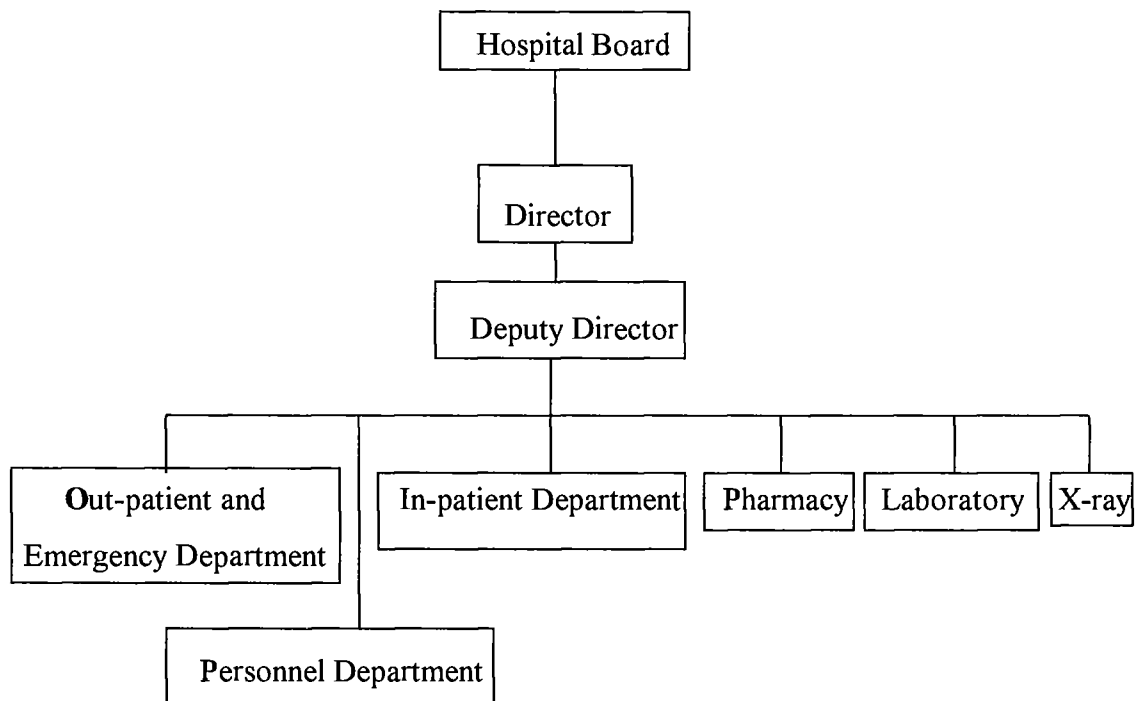
Hospital D was a private hospital located in the heart of a city in the Northeast. It was the only private hospital in the province and had 50 beds capacity. The local doctors and businessmen first established it in 1995 with the support of the national government's Board of Investment (BOI). The hospital was composed of a main building with four storeys and a separate cafeteria. Hospital D's motto was 'considerate service and concern like relatives'. The optimal goal of service achievement was patient satisfaction.

The first floor was an out-patient and emergency department which had a reception counter, nurse station, examination room, x-ray room, laboratory room, pharmacy and drug room, head nurse's office and administration office. The wheelchair and ambulance service was on this floor as well. The second and third floors housed the operation room, intensive care unit, labour room, newborn room and in-patient wards. The fourth floor had equipment storage and meeting rooms. Hospital D was fully computerised for all the patients' records, prescriptions and treatments.

Administration

Hospital D's administration board managed the hospital through the director (see Figure 6.1). There were fourteen board members, all being major shareholders. Eight (57 percent) were medical doctors. The regular monthly board meeting for hospital administration was attended by an average of six to eight members. Hospital D's board organised regular meeting with shareholders to report on the hospital's situation, progress and important issues. The director of Hospital D managed the hospital according to the policy decisions made by the hospital's board. The deputy director looked after personnel management, accounting, purchasing and supplies. All professional nurses, technical nurses, and nurse aides were under the supervision of the head nurse.

Figure 6.1 Hospital D's Organisational Structure



Personnel

There were five doctors, a pharmacist, a physiotherapist, eight professional nurses, three technical nurses, ten practical nurses and 22 nurse-aides (see Table 6.1). Other staff included accountants, receptionists, cleaners, and drivers. Hospital D's limited number of professional nurses meant that on each shift one or two of the professional nurses were assigned in the out-patient department and two in the in-patient department. All nursing staff could be rotated to work in any part of the hospital in case of emergency or more patients than usual in particular sections. Two of the five doctors were surgery specialists, while the others included a radiologist, an obstetrician and a general practitioner. The hospital also had more than ten part-time doctors who could be called to deal with patients in fields such as paediatrics, orthopaedics and obstetrics. Hospital D had not introduced any specific quality improvement scheme. Hospital D selected qualified staff both from the provincial hospital in the same city or through advertised positions. Most of the professional nurses had more than seven years experience in hospital services.

Table 6.1 Number and Type of Staff of Hospital D in 1998

Type of staff	Number
Doctor	5
Professional nurse	8
Technical nurse	3
Practical nurse	10
Technician	3
Nurse-aide	12
Physiotherapist	1
Pharmacist	1
Other staff	15
Total	58

Activities

Financial management

Hospital D's administrators did not reveal any detailed information on financial management. They did indicate that about 55 percent of expenditure was for staff salaries, and 40 percent was for medicine and equipment. Welfare, human resource development and miscellaneous accounted for the remaining five percent.

Equipment

Despite being only a 50-bed hospital, Hospital D was equipped with some modern medical equipment including a computerised thermogram, ultrasound, and an electro cardiogram. The computerised thermogram was the first and only thermogram in the province.

Patients statistics

The numbers of patients getting services from Hospital D had increased between 1995 and 1997 both in the in-patient and out-patient departments (see Table 6.2). The total number of in-patients in 1997 was 6,478 patients almost double the 1995 figure (3,343 patients). The out-patients increased by about 30 percent from 21,400 patients in 1995 to 28,030 patients in 1997. However, the number of patients declined significantly in 1998 when only 22,400 patients received services from Hospital D. These were comprised of 3,570 in-patients and 18,830 out-patients. Hospital D's director believed the reduced patient numbers were caused by the government's policy to bar beneficiaries from the civil servant insurance scheme getting services from private hospitals except for emergencies.

Table 6.2: Number of In-patients and Out-patients in Hospital D in 1995-1998.

Patients	1995	1996	1997	1998
In-patients	3,343	4,200	6,478	3,570
Out-patients	21,400	25,805	28,030	18,830
Total	24,743	30,005	34,508	22,400

Hospital D arranged various choices of service for patients to select. There were many types of room with different charges applying. The hospital advertised on various media highlighting the list of doctors, equipment, and room charges. The single room fee ranged from 800 Baht to 2,500 Baht per day depending on room size, furniture and services. For example, a 2,500 Baht room provided separate air-conditioned rooms for both patient and visitor plus telephone, hot water shower, cable TV with 29 inches TV set and three meals. The combined room (four beds in a room) cost 350 Baht to 450 Baht per bed per day.

Operation Packages

Hospital D made the hospital fees known to the public to allay fears of expensive or unexpected charges for services. For example, the cost for a patient to give birth (normal delivery) and stay about 1-2 days in Hospital D was 6,000 Baht for a place in a 4-beds room and 8,000 Baht for a single room. Caesarean section cost 1,1000 to 13,000 Baht. Other fees are shown in Table 6.3.

Table 6.3 Cost of Operations which Hospital D Advertised as Package Deals

Operation	Total cost (Baht)		Total days of admission
	4-beds room	Single room	
Normal labour	6,000	8,000	1-2
Painless labour (addition of 2,000 Baht for sterilisation.)	7,000	9,000	1-2
Caesarean section	11,000	13,000	3-5
Caesarean section + sterilisation + appendectomy	12,000	14,000	3-5
Myomectomy	13,000	15,000	3-5
Vaginal repair		7,000	1
Uterus curettage		5,000	1
Dry sterilisation		5,000	1
Appendectomy	13,000	15,000	3-5
Cholecectomy	15,000	17,000	3-5
Herniaopasty	10,000	12,000	3

Notes: These coded hospital fees did not apply in cases involving complications, blood transfusion, over stay and other extra items such as special nurses and telephone calls. Cost of Hepatitis B vaccine and tuberculosis vaccine were included in the labour, and caesarean section costs.

Staff Perceptions

Sixteen staff of Hospital D responded to the questionnaire. Most of them were female (87.5 percent). Their ages ranged from 22 to 55 years old with the average of 29.3 years. More than half (56.3 percent) of them were married. Most of the staff (50 percent) had bachelor degrees. Completion of secondary school was the highest level of educational achievement for 31.3 percent of staff while post-secondary education certificates were held by 12.5 percent. They had finished their education from 1-35 years with the median

of 6 years (SD = 8.383). Staff that responded to the questionnaire were mainly practical nurses and nurse-aides (31.3 percent each) while 18.8 percent were professional nurses, 12.5 percent were doctors and 6.3 percent was a physiotherapist (see Table 6.4).

Table 6.4 Hospital D's Staff Responding to the Questionnaire

Type of Staff	Number	Percent
Doctor	2	12.5
Professional nurse	3	18.8
Practical nurse	5	31.3
Nurse aide	5	31.3
Physiotherapist	1	6.3

The respondents had been working in Hospital D for one to five years. Their salaries ranged from 3,900 to 70,000 Baht per month with the median of 13,900 Baht (SD = 18,846.91). They had got extra income from working overtime at Hospital D. The overtime payments ranged from 5,500 to 50,000 Baht per month with the median of 10,000 Baht (SD = 15708.27).

They identified that they worked 40 to 100 hours per week with the average of 51.75 hours. Almost two-thirds of the staff (62.5 percent) had attended formal staff orientation when they first started working in Hospital D. When asked about the hospital expectations, most staff thought that Hospital D expected them to give good service to patients (75 percent) followed by doing their best for the benefit of Hospital D (43.8 percent) and making their hospital well accepted by patients and society (37.5 percent) (see Table 6.5).

Table 6.5 Perceptions of Staff on Hospital D's Expectations of Them

Perceptions on hospital expectations of staff	Number	Percent
Give good service to patients	12	75.0
Do their best for the benefit of Hospital D	7	43.8
Make their hospital well accepted by patients and society	6	37.5

There were various reasons Hospital D's staff like working in this hospital (see Table 6.6). The most common reason was serving the community (93.8 percent), followed by good social status (68.8) and good opportunity for their futures (62.5 percent). Half of the staff liked working in this hospital because of good salary and freedom in practicing their profession.

Table 6.6 Reasons Staff Liked Working in Hospital D

Reason	Number of responses	Percent
Serve the community	15	93.8
Social status	11	68.8
Good opportunity for their future	10	62.5
Freedom in their profession	8	50.0
Good salary	8	50.0
Other	2	13

All of the staff thought that a leading factor that made patients come to Hospital D was quick service (see Table 6.7). Many staff also identified good services (87.5 percent), followed by modern equipment (81.3 percent) and good quality staff (68.8 percent) as additional factors which attracted patients to Hospital D. Three staff (18.8 percent) believed that patients came for services because of cheap fees.

Table 6.7 Perceptions of Staff on Factors Attracting Patients to Hospital D

Reason	Number	Percent
Quick service	16	100
Good service	14	87.5
Modern equipment	13	81.3
Good quality staff	11	68.8
Cheap fees	3	18.8

Staff believed that Hospital D had adequate numbers of all types of staff except for specialist doctors (see Table 6.8). Only 37.5 percent of the staff thought there were adequate numbers of specialised doctors. All of the staff thought that the hospital had enough administrators, while 81.3 percent thought there were enough technicians and 68.3 percent thought there were adequate numbers of general doctors.

Table 6.8 Perceptions of Staff on Adequacy of Numbers of Staff at Hospital D

Type	Adequate	
	Number	Percent
Administrator	16	100
General doctor	11	68.3
Specialist doctor	6	37.5
Professional nurse	10	62.5
Technical nurse	10	62.5
Technician	13	81.3
Supporting staff	12	75.0

Almost half of the staff (43.8 percent) viewed the quality of various types of staff at Hospital D as fair (see Table 6.9). Half or more of staff viewed specialist doctors (62.5 percent), general doctors (56.3), technicians (50 percent), and administrators (50 percent) as being of good quality. More than half of staff thought technicians (50

percent), technical nurse (31.3 percent) and supporting staff (31.3 percent) were of good to excellent quality. One of the staff (6.3 percent) viewed the professional nurses as bad. Less than fifteen percent of staff thought that each type of staff was bad.

Table 6.9 Perceptions of Staff on Quality of Staff at Hospital D

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	-	8(50)	7(43.8)	1(6.3)	-
General doctor	1(6.3)	9(56.3)	4(25)	2(12.5)	-
Specialist doctor	3(18.8)	10(62.5)	2(12.5)	1(6.3)	-
Professional nurse	1(6.3)	6(37.5)	8(50)	1(6.3)	-
Technical nurse	-	5(31.3)	9(56.3)	2(12.5)	-
Technician	-	8(50)	8(50)	-	-
Supporting staff	-	5(31.3)	10(62.5)	1(6.3)	-

Staff identified a few items, which might be viewed as Hospital D's problems but no problem was identified by a majority of the respondents (see Table 6.10). The most commonly identified problem was expensive fees (68.8 percent). Only one person (6.3 percent) identified not enough beds as an issue. Five Hospital D staff (38.5 percent) would like to see the hospital improve its quality of service. The hospital management system was thought to need improvement by four persons (30.8 percent). Three staff (23.1 percent) wanted the hospital to emphasise human resource development. Three also wanted better welfare from the hospital while two thought Hospital D needed more staff and improvement of its environment.

Table 6.10 Perceptions of Staff on Problems in Hospital D

Areas which needed improvement	Number	Percent
Expensive fees	11	68.8
Quality of service	5	38.5
Management system	4	30.8
Human resource development	3	23.1
Staff welfare	3	23.1
Environment	2	15.4
More staff	2	15.4
Not enough beds	1	7.7
Expansion of the hospital	1	7.7

Staff responses showed that they wanted to improve their service so that it was quicker. Some wanted to improve the academic knowledge of staff, and to acquire more equipment. The in-patient department and its environment were seen to need attention. Some staff also wanted a good administrator. Human resource development was identified as a problem by three staff (23.1 percent). About half the staff had participated in human resource development since working at Hospital D. They had from one to ten instances of training outside their hospital with the median of three times. They seldom had chances to visit other institutes for study tours. Only five staff had this experience and then only once each. There was seldom any in-service training.

Patient Perceptions

There were 15 patients who responded to the questionnaire. Ten patients were from the in-patient unit and five from the out-patient unit. Sixty percent (9 patients) were female. The patients ages ranged from 17 to 61 years old with the average of 44.4 years old. Over a quarter (26.7 percent) were from the district where the hospital was located, 53.3 percent lived in other districts of that province, and the rest (20 percent) were from other province. Most of the patient (66.7 percent) had finished primary education, 20 percent had bachelor degrees and 6.7 percent had finished secondary education. The most

common occupation of patients was farmer and manual worker (46.7 percent) followed by small business (20 percent) and housewife (13.3 percent) (see Table 6.11).

Table 6.11 Occupation of Patients in Hospital D

Occupation	Number	Percent
Housewife	2	13.3
Farmer and manual worker	7	46.7
Small business	3	20.0
Civil servant	1	6.7
State enterprise employee	1	6.7
Employee of company, factory	1	6.7
Total	15	100

Only eight patients gave information on their income. These ranged from 2,500 to 50,000 Baht per month with the median of 6,000 Baht (SD. = 16124.5). More than half of the patients (53.3 percent) had been admitted into other hospitals before. The distance from their homes to Hospital D ranged from 1- 50 kilometres with the average of 17.9 kilometres. The patients spent from 220 to 50,000 Baht with the median of 3,750 Baht (SD = 1888.17) for their hospital fees. They stayed in Hospital D from 1 to 80 days with the median of 3 days (SD=25.78). The traveling expenses were 6 to 300 Baht with the median of 24 Baht (SD=141.41). Most of the patients (80 percent) relied on themselves and their family members for payment of the hospital fees. There were 13.3 percent of patients who used the workman scheme while the other 6.7 percent used the Traffic Liability Act scheme.

The most important reasons they selected Hospital D were good medical treatment (60 percent), quick service (20 percent), and reputation of the hospital (20 percent) (see Table 6.12). Two patients (13.3 percent) selected Hospital D because its fees were not expensive whereas two others came because of the conditions of their insurance scheme (13.3 percent).

Table 6.12 Reasons Given by Patients for Getting Services from Hospital D

Reasons	Number	Percentage
Good medical treatment	9	60.0
Quick service	3	20.0
Reputation of the hospital	3	20.0
Condition of health insurance scheme	2	13.3
Not expensive	2	13.3
Advice from friends and relatives	2	13.3

Thirteen patients commented about equipment and identified the adequacy and modernity of the equipment as good. The opinions of the patients on care given by doctors, nurses and other staff were mostly good and excellent (see Table 6.13). Excellent marks were as follows: the physical examination by doctors (21.4 percent), treatment by doctor (14.3 percent), nursing care (35.7 percent) and care by other staff (15.4 percent). Most of the patients identified the quality of service in the good category: the physical examination by doctors (71.4 percent), treatment by doctor (78.6 percent), nursing care (51.1 percent) and care by other staff (69.2 percent). There were only 15.4 percent of the patients who thought that the service of other staff was fair and only one patient (7.1 percent) classified the physical examination by the doctor as bad.

Table 6.13 Perceptions of Patients on Quality of Service by Hospital D's Staff

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	3 (21.4)	10 (71.4)	-	1 (7.1)	-
Treatment by doctor	2 (14.3)	11 (78.6)	1 (7.1)	-	-
Nursing care	5 (35.7)	8 (51.1)	1 (7.1)	-	-
Care by other staff	2 (15.4)	9 (69.2)	2 (15.4)	-	-

Patients were generally impressed with the short waiting time for services in Hospital D (see Table 6.14). Most of the patients (80.1 percent) viewed waiting to see a doctor as

quick to very quick. Only one of the patients (6.7 percent) thought that waiting to see doctor was slow. Most of the patients also identified waiting to pay fees as quick to very quick (88.8 percent). Similarly waiting for medicine was identified by 66.6 percent of patients as quick to very quick.

Table 6.14 Waiting Times for Various Services in Hospital D

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see doctor	4(26.8)	8(53.3)	2 (13.3)	1 (6.7)	-
Waiting to pay fee	4(44.4)	4(44.4)	1 (11.2)	-	-
Waiting for medicine	3(33.3)	3(33.3)	3 (33.3)	-	-

In the patients' perspective, Hospital D was clean (see Table 6.15). More than half of the patients (53.3 percent) identified the hospital buildings as clean, 26.7 percent as very clean and 20 percent as fair. Most of the patients (71.4 percent) thought that the areas surrounding the hospital building were clean, while the rest (22.6 percent) thought the environment was fair. Patients were satisfied with the cleanliness of the hospitals' toilets. Most of the patients (69.2 percent) thought the toilets were clean, 15.2 percent very clean and 15.4 percent fair.

Table 6.15 Perceptions of Patients on the Cleanliness of Hospital D

Area	Very clean	Clean	Fair	Dirty	Very dirty
In the building	4 (26.7)	8 (53.3)	3 (20.0)	-	-
Outside the building	-	10 (71.4)	4 (22.6)	-	-
Toilet	2 (15.4)	9 (69.2)	2 (15.4)	-	-

For the patients who had experienced getting medicine from Hospital D, most (88.9 percent) thought the continuity of getting medicine was good (see Table 6.16). Opinions were similar regarding the regularity of the doctor's visits with 77.8 percent of the patients classifying them as good. The majority of the patients (76.9 percent) thought that doctors' efforts to solve their problems were good, and 15.4 percent as fair.

However, there was one patient (7.7 percent) who identified the doctors' efforts to solve her problems as bad.

Table 6.16 Perceptions of Patients on the Continuity of Care in Hospital D

Type of continuity care	Excellent	Good	Fair	Bad	Very bad
Continuity in getting drugs	-	8(88.9)	1 (11.1)	-	-
Regularity of doctor's visits	-	7(77.8)	2 (22.2)	-	-
Doctor's efforts to solve patients' problems	-	10(76.9)	2 (15.4)	1 (7.7)	-

Even though most of the patients mentioned that they had quite good information from the hospital, there were still problems (see Table 6.17). While 71.4 percent of the patients said they received explanation and had understood the laboratory results, 14.3 percent of the patients said that they did not get any explanation of these results. Most of the patients got information and understood about their illness (86.7 percent) and the treatment (85.7 percent) they received from the hospital

Table 6.17 Perceptions of Patients on the Information Acquired from Hospital D

Information	No explanation	Explained but seldom understood	Explained and well understood
Laboratory result	1 (14.3)	1 (14.3)	5 (71.4)
Details about their illness	1 (6.7)	1 (6.7)	13 (86.7)
How to take care of themselves	2 (14.3)	1 (7.1)	11 (78.6)
Details about treatment	-	2 (14.3)	12 (85.7)

The patients were impressed with the services in Hospital D (see Table 6.18). The majority of patients identified the quality of all categories of services in this hospital as

good or excellent. Forty percent of patients rated the emergency treatment as excellent while 30 percent thought the prevention of complications was excellent, and 6.7 percent of patients thought that staff collaboration and manner were also excellent. When asked about the overall service quality, 60 percent of the patients identified it as good and 20 percent thought it was excellent. No patient was dissatisfied with the overall performance.

Table 6.18 Perceptions of Patients on the Quality of Services in Hospital D

Type	Excellent	Good	Fair	Bad	Very bad
Staff collaboration	1(6.7)	13(86.7)	1(6.7)	-	-
Emergency care	4(40)	6(60)	-	-	-
Prevention of complications	3(30)	7(70)	-	-	-
Staff's manner	1(6.7)	13(86.7)	1(6.7)	-	-
Reception for relatives	-	13(86.7)	2(13.3)	-	-
Overall service quality	3(20)	9(60)	3(20)	-	-

The level of participation in decision-making about their illness was also judged by patients to be good. Most (86.7 percent) thought they had high to very high levels of participation in decision-making about treatment and only 13.4 percent viewed such participation as low to very low (see Table 6.19). Most of the patients (85.7 percent) identified their level of participation in decisions on examination or operations as high. Only one patient (7.1 percent) thought that her participation was low.

Table 6.19 Perceptions of Patients on Participation in Decision-making on Their Health in Hospital D

Decision-making	Very Much	Much	Average	Low	Very low
Participation in present and future treatment	1 (6.7)	12 (80)	-	1 (6.7)	1 (6.7)
Participation in decisions on examination or operation	-	12 (85.7)	1 (7.1)	1 (7.1)	-

Only six patients (40 percent) identified areas in which they wanted Hospital D to improve. Four patients (27 percent) wanted the hospital to reduce its fees. Two patients suggested the improvement of staff services. All of the patients responded to the question on whether they would recommend their relatives to get health services from Hospital D. A slight majority (53.3 percent) said they would recommend their relatives to get services from Hospital D. About 26.7 percent said it would depend on circumstances while 20 percent said they would not recommend the hospital to their relatives. The most common reason (42.9 percent) for recommendation was being impressed with the services and treatment. The reason for not recommending was high expense (14.3 percent). The reasons for not being sure whether they would recommend the hospital to their relatives were depending on the result of treatment (7.1 percent) and that choice of hospital was their relative's own decision (21.4 percent). The majority of patients (80 percent) would come for health services in Hospital D again, 13.3 percent were not sure, while 6.7 percent (one patient) would not come for services again. The most common reasons for them to return for services again were being impressed by services and treatment (26.7 percent), ability in treatment (20 percent), and continuity of treatment (13.3 percent). The patient who would not come for services again used the reason of high expense. All the patients who were still not sure whether they would come back for service or not were waiting for the result of their treatment (see Table 6.20).

Table 6.20 Patients' Reasons for Returning for Service in Hospital D

Reason	Number	Percent
Impressed with services and treatment	4	26.7
Ability in treatment	3	20.0
Continuity of treatment	2	13.3
Quick service	1	6.7
Condition of their health insurance	1	6.7
Live near the hospital	1	6.7

Conclusion: Hospital D

Hospital D was doing well in the private hospital business before the economic crisis in 1997. It had built a good reputation for modern equipment and good staff especially for surgery. The administrator expected Hospital D would recover from a decline in patient numbers in 1998 and start to make some profits in 1999. However, the economic crisis and the government's strict policy of preventing civil servants from using private health services did not augur well for Hospital D's future. Staff worried about their future, whether some would be laid off or be subject to salary reduction. Staff were willing to work hard to keep their jobs and to reduce the costs of Hospital D. However, most staff wanted better management especially human resource management. Most of the nurses wanted more training. Most of staff were happy to work harder if the hospital introduced some quality improvement measures such as ISO 9002, or a total quality management initiative.

Hospital E

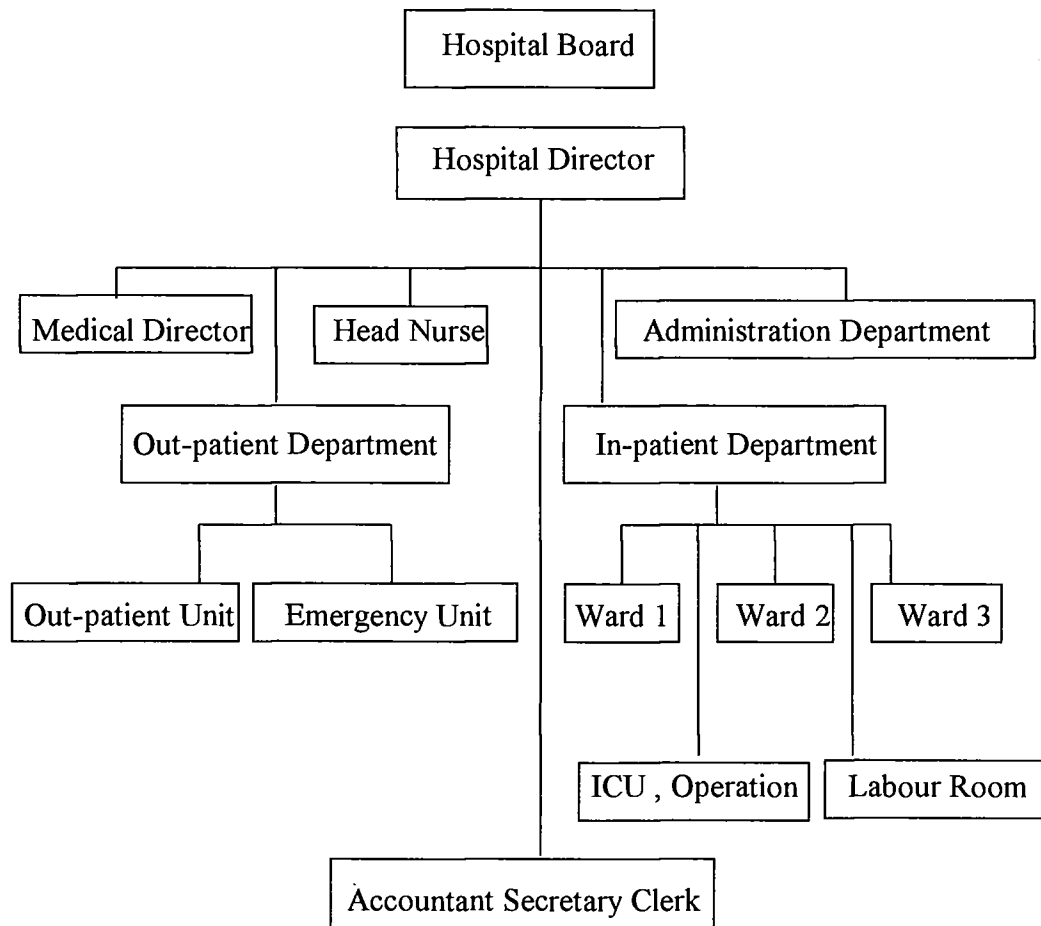
Hospital E was a 100-beds hospital located in the city of a northeastern province. In 1998, the city population was 165,000. The city had a regional hospital and a university hospital. Hospital E was one of the three biggest private hospitals in the province and was situated about one kilometre from the other two big private hospitals. Hospital E was founded in 1995 with support from the government's Board of Investment (BOI). Hospital E sold about 30 million shares to the public, at 10 Baht per share with a minimum holding of 1,000 shares. Major shareholders were local doctors and businesspersons. The initial budget of Hospital E was 50 million Baht.

Hospital E was composed of two sections, the diagnostic section and the hospital. The diagnostic section had various diagnostic equipment and services, such as CT scan, ultrasound, mammography, plain X-ray and fluoroscopy. It was also capable of carrying out pathological and cytological laboratory works. Patients could get test results within 48 hours. Other laboratory service included blood chemistry, haematology, microbiology and radioimmunoassay. The diagnostic section also provided some microscopic examination of organs such as colposcopy, cytoscopy, proctosigmoidoscopy, gastroscopy, colonoscopy and bronchoscopy. This section worked as a check-up and screening unit. The hospital section was divided into an out-patient department, an in-patient department, accounting unit and administration.

Administration

Hospital E was a franchise of one of the most famous private hospitals in Bangkok. The administration of Hospital E was under the guidance of the hospital's board. There were eleven board members. One was the director of that private hospital in Bangkok, and all except one were medical doctors. Similarly, all except one were specialists and worked part-time in Hospital E. There was a regular monthly meeting of the hospital's board. There were two or three meetings per week of the hospital administrators to discuss important issues and quality improvement.

Figure 6.2 Hospital E's Organisational Structure



Personnel

There were 67 medical staff and 58 supporting staff making a total of 125 staff working in Hospital E in 1998. Most medical staff were practical nurses (29.9 percent), professional nurses (26.9 percent) and nurse aides (14.9 percent) (See Table 6.21). There were five doctors (7.5 percent of medical staff), one of whom was a general practitioner, while the rest were specialists in surgery, medicine and paediatrics. Most supporting staff were cleaners (17.2 percent), ward clerks (15.5 percent), financial personnel (15.5 percent) and accountants (10.3 percent).

Table 6.21 Hospital E's Staff in 1998

Type of staff	Number	Percent
Medical staff		
Doctor	5	7.5
Professional nurse	18	26.9
Practical nurse	20	29.9
Nurse aide	10	14.9
Pharmacist	1	1.5
Pharmacist assistant	4	5.9
Laboratory and x-ray staff	7	10.4
Physiotherapist	1	1.5
Physiotherapist assistant	1	1.5
Total	67	100
Supporting staff		
Secretary	3	5.1
Marketing staff	3	5.1
Personnel staff	1	1.7
Debt collector	3	5.1
Purchasing staff	1	1.7
Ward clerk	9	15.5
Accountant	6	10.3
Financial personnel	9	15.5
Cleaner	10	17.2
Driver	3	5.1
Stretcher pusher	4	6.9
Gardener	2	3.4
Nutritionist	4	6.9
Total	58	100

Expenditure

Hospital E did not want to reveal the budget and expenditure information because they regarded it as confidential and did not wish their competitors to gain knowledge of such data. Hospital E identified that its revenue covered expenditure in 1997, and a profit was expected in 1998. However, the economic crisis in mid-1997 and government policy in 1998, which did not allow persons under the civil servant insurance scheme to get service from private hospitals, impacted adversely on the number of hospital clients. Hospital E's administrator provided data on the proportions of expenditure that Hospital E spent in 1997 (see Table 6.22). The highest proportion of Hospital E's expenditure (55 percent) was spent on staff salaries. Medicine and equipment accounted for 35 percent of its spending whereas 7 percent was used for maintenance and only 3 percent for human resource development.

Table 6.22 Types of Expenditure of Hospital E

Type of expenditure	Percentage
Staff salary	55
Medicine and equipment	35
Maintenance	7
Human resource development	3

The average number of patients receiving services in the out-patient department of Hospital E in 1998 was 150 to 200 per day. The in-patient wards had an average of 20 to 50 patients per day. Most of the patients admitted into the hospital were for child delivery. The intensive care unit had a maximum of seven patients on some occasions but on average the figure was three patients per day. Most of the patients in the intensive care unit were persons who had been involved in accidents.

Marketing

Hospital E had various strategies to attract clients. The hospital had competitive packages for physical check-ups for both ordinary people and for workers who were applying to go overseas. Doctors who worked for Hospital E could give 10 percent discounts to patients and could forego doctors' fees for some patients. Doctors who worked part-time at Hospital E could make appointments with patients to get services there since it was quicker than waiting in queues in public hospitals. Hospital E received a service fee, and the cost of medicine and operations in such situations. Hospital E was sent patients from other hospitals, from within and outside the province especially for computerised thermography. Hospital E gave 10 percent of the fee to the health staff who accompanied patients from other hospitals and 10 percent to the doctor who ordered patients to get computerised thermography services.

Quality Improvement

Hospital E had not introduced any formal measures for quality improvement. However, it planned to use ISO 9002 in the near future. The hospital administrator considered quality as one of the key factors for the hospital's survival, especially in the fiercely competitive private hospital market in this province. At that time, the administrator tended to use the regular meetings of key managers to deal with important issues relating to service quality. Some doctors who participated in hospital management had been sent to undertake training such as the Master of Business Administration (MBA), and total quality management (TQM) courses. There was very little in-service training for staff especially nurses. Hospital E tended to hire experienced nurses to work full-time and high-ranked nurses from public hospitals to work part-time as supervisors on night shifts.

Staff Perceptions

There were 36 staff of Hospital E who responded to the questionnaire. Most of them were female (86.1 percent). Their ages ranked from 23 to 40 years old with the average of 29.5 years. More than half (55.6 percent) of them were married. The largest group in

terms of educational achievement were bachelor degree holders (36.1 percent) followed by secondary education (30.6 percent), high school or equivalent (36.1 percent) and postgraduate degrees (11.1 percent). They had finished their education from 2-20 years ago with the median of 6 years (SD = 4.149). All types of staff responded to the questionnaire. The biggest group was practical nurses (41.7 percent), professional nurses (30.6 percent), doctors (8.3 percent), technicians (8.3 percent) and others (11.1 percent). They had been working at Hospital F for 1 to 5 years with the average of 3 years. Their salaries ranged from 4,005 to 60,000 Baht per month with the median of 9,012 Baht (SD = 13,333.97). They obtained extra income from Hospital E in the range of 200 to 100,000 Baht per month with the median of 3,000 Baht (SD = 18919.47). The 100,000 Baht figure applied to one doctor who did not get an ordinary salary from Hospital E. He worked there full time at his private clinic and all pay was classified as extra income.

Staff reported that they worked 40 to 82 hours per week with the average of 50.1 hours. When asked about the hospital's expectation of staff, 69.4 percent identified giving good service to patients, and 47.2 percent noted making their hospital well accepted by patients and society (47.2 percent) (see Table 6.23). About 36 percent thought they were expected to do their best for the benefit of Hospital E.

Table 6.23 Perceptions of Staffs on Hospital E's Expectations of Them

Expectation	Number of Staff	Percent
Good service for patients	25	69.4
Well accepted by patients and society	17	47.2
Benefit of Hospital E	13	36.1

There were various reasons offered by Hospital F staff for liking to work in this hospital (see Table 6.24). The most common reason was serving the community (83.3 percent), followed by providing good opportunities for their future (69.4), good social status (66.7 percent) and freedom to practice their profession (66.7 percent).

Table 6.24 Reasons Staff Liked Working in Hospital E

Reason	Number of responses	Percent
Serve the community	30	83.3
Good opportunities for the future	25	69.4
Freedom to practice their profession	24	66.7
Social status	24	66.7
Good salary	23	63.9

Most of Hospital E staff believed that the factors that made patients come for services in Hospital E were good services (97.2 percent), quick services (94.4 percent), good quality staff (88.9 percent), and modern equipment (83.3 percent) (see Table 6.25). Fourteen staff (38.9 percent) were confident that patients got services from this hospital because of its cheap fees.

Table 6.25 Perceptions of Staff on Reasons Why Patients Sought Services from Hospital E

Reason	Number	Percent
Good services	35	97.2
Quick service	34	94.4
Good quality of staff	32	88.9
Modern equipment	30	83.3
Cheap fees	14	38.9

Staff generally believed that Hospital E had enough of all types of staff. All staff thought Hospital E had adequate administrators while more than 90 percent identified that there were enough nurse aides and supporting staff (see Table 6.26). Numbers of specialist doctors and professional nurses were viewed by fewer staff as adequate (61.1 percent and 69.4 percent).

Table 6.26 Perceptions of Staff on Adequacy of Numbers of Staff at Hospital E

Type	Adequate	
	Number	Percent
Administrator	36	100
General doctor	29	80.6
Specialist doctor	22	61.1
Professional nurse	25	69.4
Technical nurse	35	97.2
Technician	29	80.6
Supporting staff and nurse aide	34	94.4

When asked about the professional quality of their colleagues most staff (86.6 percent) viewed the professional nurses as good to excellent quality followed by administrators (77.8 percent) and specialist doctors (71.2 percent) (see Table 6.27). More than half the staff thought technicians (58.4 percent), and supporting staff (55.6 percent) had good to excellent quality. None of the staff viewed administrators, general doctors, professional nurses and technicians as bad or very bad. Only one member of staff thought that specialist doctors and practical nurses were bad while two persons thought supporting staff were bad.

Table 6.27 Perceptions of Staff on Quality of Staff at Hospital E

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	4 (11.1)	24 (66.7)	8 (22.2)	-	-
General doctor	2 (3.7)	22 (62.9)	11 (31.4)	-	-
Specialist doctor	5 (13.9)	21 (58.3)	9 (25)	1 (2.8)	-
Professional nurse	4 (11.1)	27 (75.0)	5 (13.9)	-	-
Technical nurse	1 (2.8)	26 (72.2)	8 (22.2)	1 (2.8)	-
Technician	1 (2.8)	20 (55.6)	15 (41.7)	-	-
Supporting staff	1 (2.8)	19 (52.8)	14 (38.9)	2 (5.6)	-

When asked to identify what they thought patients' problems were, 63.9 percent of staff pointed to expensive fees (see Table 6.28). Other types of problem received few mentions: slow services (19.4 percent), overcrowding of patients (5.6 percent) and not enough in-patient beds (2.8 percent).

Table 6.28 Perceptions of Staff on Patients' Problems in Getting Services in Hospital E

Problems	Number	Percent
Expensive fee	23	63.9
Slow service	7	19.4
Overcrowding	2	5.6
Not enough in-patient beds	1	2.8

Twenty-six staff answered a question on what should be improved in Hospital E. There was no consensus in their recommendation. More than half of them (57.5 percent) thought that Hospital E should expand its hospital building since it was too crowded (see Table 6.29). Also identified as needing improvement were the environment of the hospital (38.5 percent), the numbers of staff (23.1 percent), services for clients (15.4 percent) and equipment (15.4 percent). Few staff mentioned that the hospital should improve administration (3.8 percent) and limitation on drugs which doctors could prescribe (3.8 percent). For themselves, staff wanted Hospital E to increase their salary (26.9 percent), improve staff welfare (11.5 percent), improve staff morale (3.8 percent), and devote more resources to human resource development (3.8 percent).

Table 6.29 Perceptions of Staff on Areas which Need Improvement in Hospital E

Areas which need improvement	Number	Percent
Expansion of hospital building	15	57.7
Environment	10	38.5
Staff's salary	7	26.9
Number of staff	6	23.1
Service	4	15.4
Equipment	4	15.4
Staff welfare	3	11.5
Staff morale	1	3.8
Human resource development	1	3.8
Conflict among staff	1	3.8
Limitation of drugs used in the hospital	1	3.8
Administration	1	3.8
Fees	1	3.8

Hospital E's human resource development was limited and depended on the position or job performed by staff. Administrators and department heads were more likely than other staff to have had chances for training, study visits and workshops. Some of the high ranked staff had participated in up to 25 training courses, ten study visits and ten workshops since commencing work at Hospital E. However, most staff averaged only one training course, two workshops and one study visit.

Patient Perceptions

Thirty-three patients answered the questionnaire. Most of them (66.7 percent) had been admitted into the hospital. The majority of them were female (60.6 percent). The patients' ages ranged from 15 to 80 years old with the average of 40.9 years. About 40 percent of the patients lived in the same district of the province where the hospital was located, 36.4 percent of the patient were from other districts of the province while 24.2 percent were from other provinces.

In terms of educational levels, 30.3 percent of the patients had only primary education, followed by secondary (grade 9) (24.4 percent), and 21.2 percent who had completed high school or equivalent. Fifteen percent of the patients finished bachelor degrees and 9.1 percent had higher education qualifications beyond bachelor degree. The most common occupations among the patients were self-employed merchants (27.3 percent) followed by housewives (18.2 percent) and farmers and workers (15.2 percent). There were 12.1 percent who were civil servants and 6.1 percent were staff of state enterprises (see Table 6.30).

Table 6.30 Occupations of Patients in Hospital E

Occupation	Number	Percent
Merchant	9	27.3
Housewife	6	18.2
Farmer and worker	5	15.2
Civil servant	4	12.1
Student	3	9.1
Staff of company, factory	3	9.1
Staff of state enterprise	2	6.1
Monk	1	3

The patients incomes ranged from 1,200 to 36,000 Baht per month with the median of 10,000 Baht (SD = 10953.2). About half of the patients learned about Hospital E from their friends and relatives, while 21.2 percent of the patients had used the hospital's services. Few of the patients (9.1 percent) were recommended by health personnel. Most of the patients (65.2 percent) lived near the hospital. The median distance was 40.5 kilometres (SD = 57.5), although, one patient did live 260 kilometres from Hospital E. Only 21 of the 33 patients gave information about their hospital fees. The lowest reported was 310 Baht whereas the highest was 90,000 Baht. The median fee was 2,500 Baht (SD = 23806.7). The patients were admitted for 2 to 25 days, and the median length of stay was 3.5 days (SD = 8.3).

Sixty percent of patients paid for their own hospital fees or were helped by their relatives. The rest had their fees paid by third parties. The most common third party was the Traffic Liability Act Scheme (15.2 percent) (see Table 6.31).

Table 6.31 Sources of Patient Payments for Hospital E's Fee

Patient's Fee Paid by	Number	Percent
Patient and relatives	20	60.6
Traffic Liability Act Scheme	5	15.2
Civil servant and state enterprise scheme	4	12.1
Social Security Scheme	1	3.0

The most common reasons given for selecting Hospital E were good service and medical care (45.5 percent) followed by quick service (30.3 percent) and proximity of residence to the hospital (30.3 percent) (see Table 6.32). Some of the patients chose to get services in Hospital E because of its good doctors and specialist (24.2 percent).

Table 6.32 The Most Common Reasons for the Patients to Get Services from Hospital E

Reasons	Number	Percentage
Good service and medical care	15	45.5
Quick service	10	30.3
Live near the hospital	10	30.3
Good doctors and specialists	8	24.2
Reputation of the hospital's capability	2	6.1
Cheap fees	2	6.1
Advised by respected person	2	6.1
Modern equipment	1	3
Good manner of staff	1	3

Almost all patients thought Hospital E had enough equipment and modern equipment. Most of the patient (96.9 percent) thought the hospital had good to excellent adequacy of equipment. Similarly, 97 percent of the patients identified the hospital as good to excellent for the modernity of its equipment (see Table 6.33).

Table 6.33 Perceptions of Patients on Equipment at Hospital E

Equipment	Excellent	Good	Fair	Bad	Very bad
Adequacy of equipment	3 (9.4)	28 (87.5)	1 (3.1)	-	-
Modernity of equipment	3 (9.1)	29 (87.9)	1 (3.0)	-	-

The opinions of the patients on care given by doctors, nurses and other staff were good to excellent (see Table 6.34). All of the patients thought nursing care here was good to excellent. Most of the patients viewed as good to excellent the physical examination by doctors (93.8 percent), treatment by doctors (96.8 percent) and care by other staff (90.6 percent). None of the patients viewed care by staff here as bad or very bad

Table 6.34 Perceptions of Patients on the Quality of Care by Different Type of Health Personnel in Hospital E

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	8 (25)	22 (68.8)	2(6.2)	-	-
Treatment by doctor	7 (22.6)	23 (74.2)	1(3.2)	-	-
Nursing care	5 (15.6)	27 (84.4)	-	-	-
Care by other staff	2 (6.2)	27 (84.4)	3(9.4)	-	-

The majority of the patients were well satisfied with waiting times for various activities in Hospital E. Most of the patients identified as quick to very quick the waiting time to

see doctors (81.8 percent), waiting time to pay fees (93.3 percent) and waiting time for drugs (96.6 percent) (see Table 6.35). Very few patients thought the waiting times were average. Only 3 percent of patients thought the waiting time to see a doctor was slow. From observation, patients spent about 30 minutes to 3 hours to obtain services in this hospital. Waiting time for patients to see a doctor ranged from 10 to 15 minutes. Waiting time to pay the fee and get drugs took not more than 15 minutes.

Table 6.35 Perceptions of Patients on Waiting Time for Various Activities in Hospital E

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see doctor	7 (21.2)	20 (60.6)	5 (15.2)	1 (3)	-
Waiting to pay fee	1 (3.3)	27 (90)	2 (6.7)	-	-
Waiting for drug	2 (6.9)	12 (89.7)	1 (3.4)	-	-

The patients viewed Hospital E as clean (see Table 6.36). Over half the patients (54.5 percent) identified the hospital buildings as clean, 30.3 as very clean and 15.2 percent as fair. Most of the patients (69.7 percent) thought that the areas surrounding the hospital buildings were clean, 21.2 percent said they were fair while 6.1 percent thought they were very clean. More than half the patients (56.3 percent) identified the toilets as clean, 18.8 percent as very clean, 15.6 percent as fair. However, about 10 percent of patients thought the toilets were dirty.

Table 6.36 Perceptions of Patients on the Cleanliness of Hospital E

Area	Very clean	Clean	Fair	Dirty	Very dirty
In the building	10 (30.3)	18 (54.5)	5 (15.2)	-	-
Outside the building	2 (6.1)	23 (69.7)	7 (21.2)	1 (3)	-
Toilet	6 (18.8)	18 (56.3)	5 (15.6)	3 (9.3)	-

For the patients who experienced getting drugs from Hospital E, most of them (80 percent) thought the continuity of getting drugs was good and 13.3 said it was excellent

(see Table 6.37). There were similar views regarding the regularity of the doctors' visits. Most of the patients (81.5 percent) thought that the doctors' visiting frequency was good while 14.8 percent said it was excellent. All of the patients were impressed with the doctors' efforts to solve their problems.

Table 6.37 Perceptions of Patients on Continuity of Care in Hospital E

Type of continuity care	Excellent	Good	Fair	Bad	Very bad
Continuity in getting drugs	4 (13.3)	38 (80)	2 (6.7)	-	-
Regularity of doctors' visits	4 (14.8)	2 (81.5)	1 (3.7)	-	-
Doctors' efforts to solve patients' problems	11 (35.5)	20(64.5)	-	-	-

Most of the patients believed they received enough information from Hospital E. All patients were given information and had good understanding on how to take care of themselves (see Table 6.38). Almost all patients said they got information and had good understanding about their illness (96.9 percent) and treatment (96.9 percent). Most patients said they had been given explanations and had good understanding on laboratory results (89.3 percent). Very few patients identified themselves as getting no explanations from staff or having explanations which they did not understand.

Table 6.38 Perceptions of Patients on the Information Acquired from Hospital E

Information	No Explanation	Explained but seldom understood	Explained and well understood
Laboratory results	2 (7.1)	1 (3.6)	25 (89.3)
Illness	1 (3.1)	-	31 (96.9)
How to take care of themselves	-	-	32 (100)
Treatment	-	1 (3.1)	31 (96.9)

The patients were generally impressed with the services provided in Hospital E (see Table 6.39). A few patients (6.7-19.4 percent) identified the quality of the different services in Hospital E as excellent. However, the category of ‘good’ was the most popular choice of patients. More than 60 percent of patients thought that the staff collaboration, staff’s manner and prevention of complications in Hospital E were good. When asked about the overall service quality, 64.5 percent of the patients identified it as good and 16.1 percent of them thought it was excellent. None of the patients thought the quality of service in this hospital was bad or very bad. Some of the patients (11.1 to 30 percent) rated the quality of service as fair

Table 6.39 Perceptions of Patients on the Quality of Services in Hospital E

Type	Excellent	Good	Fair	Bad	Very bad
Staff collaboration	2 (6.7)	19 (63.3)	9 (30)	-	-
Emergency care	2 (9.1)	13 (59.1)	7 (31.8)	-	-
Prevention of complications	2 (8.3)	16 (66.7)	6 (25)	-	-
Staff’s manner	6 (19.4)	21 (67.7)	4 (12.9)	-	-
Reception for relatives	4 (14.8)	20 (74.1)	3 (11.1)	-	-
Overall service quality	5 (16.1)	20 (64.5)	6 (13.4)	-	-

Patients generally reported favourably on their level of participation in decision-making about their illness and treatment. A high ranking was given by 62.5 percent of patients concerning their participation in decisions on examinations or operations (see Table 6.40). The level of knowledge on treatment was mostly considered high (73.4 percent). The level of knowledge about their disease was viewed by 62.5 percent of the patients as high. Very few patients thought they had low and very low levels of participation about their illnesses and treatment.

Table 6.40 Perceptions of Patients on Participation in Decision-making on their Health

Participation in Decision-making	Very High	High	Average	Low	Very low
Knowing about own illness	2 (6.3)	20 (62.5)	9 (28.1)	1 (3.1)	-
Knowing about present and future treatment	-	22 (73.4)	6 (20)	1 (3.3)	1 (3.3)
Participation in decisions on examinations or operations	2 (8)	16 (64)	6 (24)	-	1 (4)

Patients wanted Hospital B to make improvement in some areas. Over half the patients (61.5 percent) recommended hospital expansion since they considered it had inadequate space (see Table 6.41). Some patients (38.5 percent) wanted the hospital to improve the cleanliness of toilets especially at the out-patient department. A few others suggested improvement to the cleanliness of the hospital (7.7 percent) and lower fees (7.7 percent).

Table 6.41 Suggested Improvements to Hospital E Identified by Patients

Areas	Percentage
Crowding of hospital wards, car park	61.5
Cleanliness of toilets	38.5
Cleanliness of hospital wards	7.7
Hospital fees	7.7

Most of the patients (77.4 percent) said they would advise their relatives to get health services from Hospital E. Only 12.9 percent of the patients would not advise their relatives to get service from Hospital E whereas the rest (9.7 percent) were not sure what they would advise their relatives. The reasons for advising their relatives to obtain services in Hospital E were good service (40 percent), quick service (16 percent), specialist doctors (8 percent) and affordable fees (8 percent). The reasons given for not recommending Hospital E to their relatives were slow service and expensive fees. The majority of patients (78.1 percent) said they would come back for service here again because of good service and medical care (41.7 percent), continuity of care (25 percent), a condition of their health insurance (8.3 percent) and good doctors (4.2 percent). The reasons given for not coming back were too far, wanting to go to other hospitals and expensive fees.

Conclusion: Hospital E

Local doctors and businessmen established Hospital E. However, it was also a franchise of a famous hospital in Bangkok. The hospital was famous for obstetrics with many patients coming for antenatal care and child delivery. Physical check-up for overseas job application was also a well-known activity of this hospital. Hospital E was smaller than the city's two other private hospitals which, like Hospital E, were established during good economic times. However, Hospital E was the only one of them which could survive. Of the other two private hospitals, one was closed down while other was not in a good financial situation. The perceptions of customers about Hospital E were of good services, convenience and relatively cheap fees. Hospital E had not administered any formal quality improvement measure to assure its service quality, but planned to use ISO

9002 in 1999. Medical staff, especially nurses, wanted some in-service training. Both staff and patients wanted Hospital E to expand hospital space since it was over-crowded and to hire more specialist doctors.

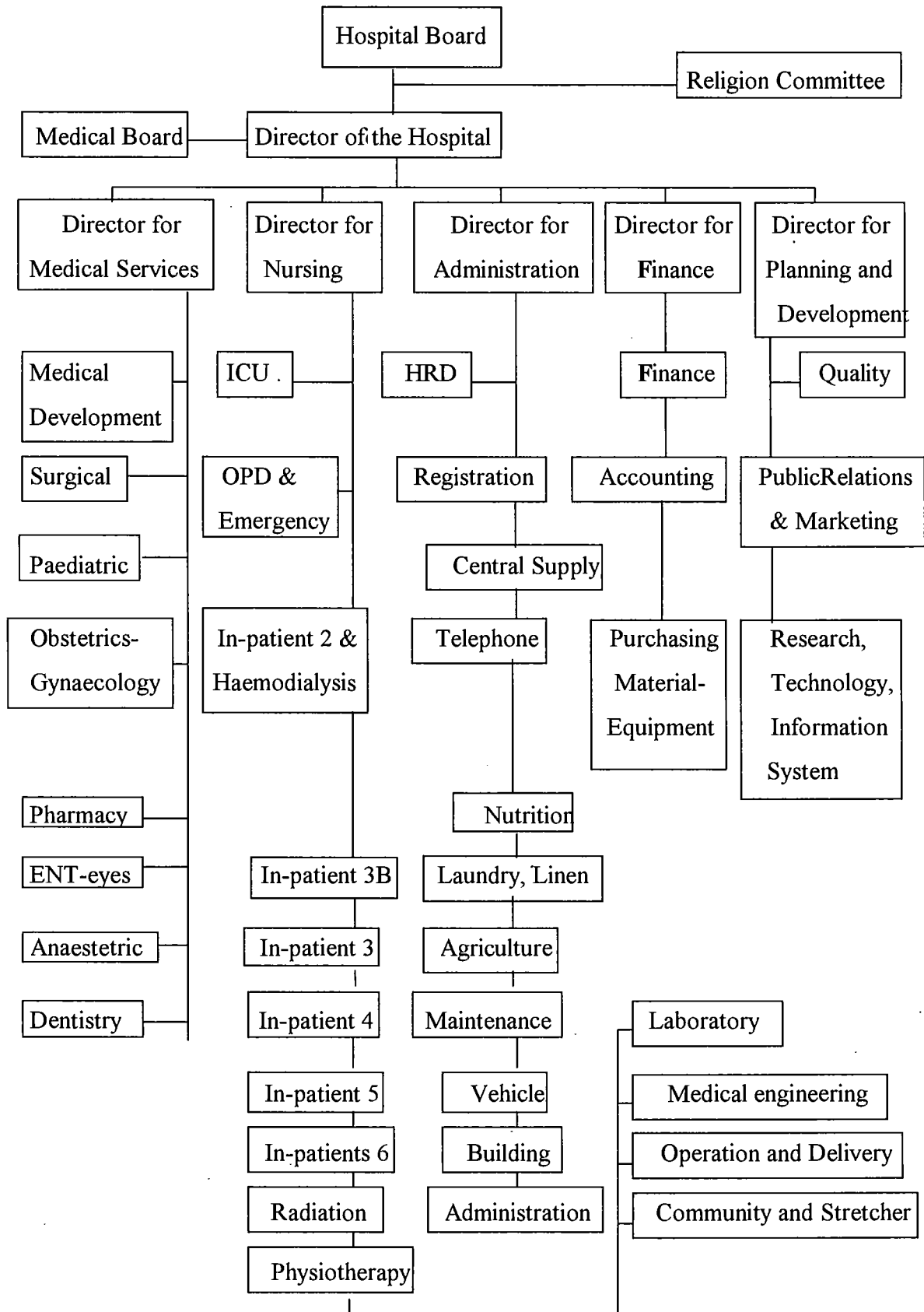
Hospital F

Hospital F was a private not-for-profit hospital located in the centre of a northeastern province with a population of 2,534,287 in 1998. The province where Hospital F was located was comprised of twenty districts. Hospital F started services on 24 July 1958 as a clinic to provide health services to the poor. Then, there was only one doctor and a nurse working in the clinic. Later, there was need for beds for patients who had to be hospitalised for treatment. This necessitated raising funds from the public and a Catholic organisation to build a hospital. It took almost two years to construct a six-storey building. Services commenced at Hospital F on 1 June 1974 with 150-beds capacity. In 1995, the hospital started the construction of a 10-storey building and planned to open this building on 1 June 1997 to celebrate its 25-years anniversary in 1999. However, there were delays to interior decoration and the installation of medical equipment so that the new building was rescheduled to started operating in early 1998. Hospital F was scheduled to have 250-beds capacity after the opening of the new 10-storey building. Hospital F objectives were firstly, to provide health services to general patients equally whatever their economic status, sex, age, race or religion, with modern technology, good morale, kindness and humanitarianism; secondly, to emphasise human resource development; and thirdly to support the poor by providing them adequate and proper health care. In 1998, Hospital F operated with the slogan of 'services with kindness and efficient treatment'.

Administration

Hospital F's organisational structure is shown in Figure 6.3. The administration of Hospital F was under a hospital board. The board was composed of key supporters of the hospital including Roman Catholic priests and nuns who had administration or health backgrounds. The religious committee which was chaired by four priests advised the hospital board. Authority in the hospital was divided between the director of the hospital and the management committee. The director of the hospital looked after the medical departments. These seven medical departments were under the supervision of the medical committee. These medical departments were medicine; surgery; paediatrics; obstetrics and gynaecology; ears nose throat, and eyes; anaesthetics; and dentistry. The management committee looked after four departments: nursing, administration, finance, and planning and development. The nursing department chaired by the director of nursing was composed of fourteen units. These units were the intensive care unit (ICU), out-patient and emergency, six in-patient units, radiation, physiotherapy, laboratory, medical engineering, operation and delivery room, and community service and stretchers. There were eleven units under the management of the director for administration. These units included human resources, registration, central supply, telephone, nutrition, laundry and linen, agriculture (gardening), maintenance, vehicles, building and administration. The finance director looked after units for finance, accounting, pharmacy and procurement. The director for planning and development managed the quality development, public relation and marketing, research and information system units.

Figure 6.3 Organisational Structure of Hospital F



Personnel

Hospital F had 435 staff in 1998. There were 126 staff who gave direct health services to patients. Most of these staff were professional nurses (45 percent), practical nurses (35.8 percent) and doctors (13.3 percent) (See Table 6.42). There were also 319 supporting staff who worked as clerks, accountants and other workers

Table 6.42 Hospital F's Staff in 1997

Type of staff	Number	Percent
Doctor	16	12.7
Professional nurse	54	42.9
Practical nurse	43	34.1
Technician	6	4.8
Pharmacist	3	2.4
Physiotherapist	3	2.4
Dentist	1	0.8
Total	126	100

Between 1994 and 1997, Hospital F was in a situation of high competition among private hospitals in its province. Two big private hospitals had recently started providing services. This created a problem of brain drain from Hospital F as some doctors and nurses were attracted to the new hospitals by better salaries. Hospital F had to continuously adjust salaries upward to hold on to good quality staff. The hospital also recognised the need to improve its quality of service to compete with other hospitals. Thus, Hospital F introduced a quality improvement scheme called "Hah Sor" in Thai.

In 1997, Hospital F started implementing both the ISO 9002 and total quality management (TQM) to improve its quality (see Figure 6.4). However, there has been more emphasis on the ISO 9002. The hospital signed a contract with a licensed ISO 9002 licensed auditing company in early 1997. The company then pre-audited the hospital

service quality and working processes. After this, Hospital F announced a so-called 'quality policy'. This quality policy stated that the hospital aimed to provide international standard quality of services to give maximum client satisfaction. This quality policy supported the hospital slogan of 'service with kindness and efficient treatment'. In order to meet this optimal goal, the hospital had committed to four strategies. Firstly, there was strong commitment to establish a quality assurance instrument based on the ISO 9002 standard. Secondly, it emphasised that the quality of services of the hospital was the responsibility of all staff. Thus, staff at all levels had to participate in implementing this quality improvement policy. The third strategy was to ensure that all regulations concerning processes would be followed and revised where necessary to be up-to-date and effective. The fourth strategy was to educate and train all staff to understand the quality policy in order to secure their cooperation.

Figure 6.4 Quality System Structure of Hospital F



The pre-audit results encouraged Hospital F to take several measures to improve its service quality. These measures included improving the patients' records and other forms of the hospital; devising a quality plan which clearly identified the working processes of

staff and records of health services. This quality plan enhanced quality control and evaluation. At the time of this study, there had been various staff meetings and training courses for ISO 9002 activities. Several new forms for patients' records had been introduced while medical and nursing practice guidelines had been drawn up to assist in the provision of appropriate care to patients.

Services

In 1997, a total of 142,793 patients received services from the out-patient unit of Hospital F with the average of 391 patients per day (see Table 6.43). The number of patient had decreased from 164,046 patients at an average of 449 patients daily in 1996 at the peak of the economic boom. However, the out-patient numbers in 1997 were still higher than those in 1994 when competition had started with other private hospitals in the province. The total number of out-patients of Hospital F was 141,014 in 1994.

Table 6.43 Number of Out-patients Getting Services from Hospital F in 1994, 1996 and 1997

Year	Number	Average number of out-patients per day
1994	141,014	386
1996	164,046	449
1997	142,793	391

The trends for the in-patient unit over the years 1994, 1996 and 1997 were slightly different from those of out-patients (see Table 6.44). They had surged during the economic boom but in 1997 fell below the 1994 figures. In 1994, there were only 39,181 in-patients, at an average of 107 patients per day in Hospital F. The number of in-patients increased to a peak of 41,300 patients in 1996 with an average of 113 patients daily. In 1997, the in-patient numbers decreased to 37,097 with the average of 102 in-patients daily.

Table 6.44 Number of In-patients in Hospital F in 1994, 1996 and 1997

Year	Number	Average number of in-patients per day
1994	39,181	107
1996	41,300	113
1997	37,097	102

In 1997, at Hospital F 3,707 operations were performed, 415 mothers delivered their babies and 129 patients died.

Staff Perceptions

Thirty-six staff responded to the questionnaire. Most of them were female (77.8 percent). Their ages ranged between 21 and 59 years old with the average of 33.5 years. With reference to highest educational level achieved, 61.2 percent of the respondents had finished bachelor degrees, 22.2 percent had completed high school or equivalent, whereas 11.1 percent had post-graduate degrees. The largest group of hospital staff respondents were professional nurses (33.3 percent), followed by doctors and practical nurses (22.2 percent each), physiotherapists and technicians (13.9 percent) and nurse aides (8.3 percent) (see Table 6.45).

Table 6.45 Types of Staff Responding to the Questionnaire in Hospital F

Types	Number	Percentage
Professional nurse	12	33.3
Doctor	8	22.2
Practical nurse	8	22.2
Nurse aide	5	8.3
Physiotherapist, technician	3	13.9
Total	36	100

The staff had finished their degrees between 1 and 27 years ago with the median of 10 years (SD = 6.192). The respondents had been working in Hospital F from 1-22 years with the median of five years (SD = 6.349). Their salaries ranged from 4,200 to 70,000 Baht per month. The median salary was 13,650 Baht per month (SD = 16,052.161). The extra income earned from Hospital F ranged from 700 to 80,000 Baht per month with the median of 3,200 Baht (SD = 20,689.574). This extra income came from working overtime and doctors' fees.

When asked about hospital expectations, the most popular answers were 63.9 percent to give good care to the patients (63.9 percent), to make sure the community was satisfied with the hospital (41.7 percent), and to do their best for the hospital's benefit (22.2 percent). When asked about the reasons they liked working in the hospital, most of the respondents answered because they served the community (83.3 percent) (see Table 6.46). The next most popular answer was that they had freedom in practicing their profession (69.4 percent), followed by good salary and social status (53.3 percent each).

Table 6.46 Reasons Staff Liked Working in Hospital F

Reason	Number of Respondents	Percents
Serve the community	30	83.3
Freedom to practice their profession	25	58.3
Good salary	21	58.3
Social status	21	69.4
Good opportunity for their future	18	50.0
Other	5	13.9

Hospital F's staff believed that the most common factors attracting patients were modern equipment (88.9 percent), good services (80.6 percent), quick services (77.8 percent) and good quality staff (75 percent) (see Table 6.47). Almost 40 percent of staff thought patients came for services in Hospital F because of its cheap fees.

Table 6.47 Perceptions of Staff on Factors Attracting Patients to Hospital F

Reason	Number	Percent
Modern equipment	32	88.9
Good services	29	80.6
Quick service	28	77.8
Good quality staff	27	75.0
Cheap fee	13	36.1

Staff believed Hospital F had adequate numbers of all types of staff except professional nurses. Responses indicated that 91.7 percent of staff thought that there were enough supporting staff, 86.1 percent thought there were enough general practitioners and 80.6 percent thought there were ample administrators (see Table 6.48). More than half of the staff (55.6 percent) thought there were inadequate numbers of professional nurses.

Table 6.48 Perceptions of Staff on Adequacy of Staff in Hospital F

Type	Adequacy of staff	
	Number	Percent
Administrator	29	80.6
General doctor	31	86.1
Specialist doctor	26	72.2
Professional nurse	16	44.4
Practical nurse	25	69.4
Technician	28	77.8
Supporting staff	33	91.7

There were 35 staff who responded to the question of what they thought were patients' problems when getting services from Hospital F (see Table 6.49). Some staff (37.1 percent) thought expensive fees were a problem, 22.9 percent pointed to inadequate numbers of beds for in-patients while slow service was cited by 17.1 percent. Few staff (8.6 percent) identified overcrowding as a problem of patients.

Table 6.49 Perceptions of Staff on Patients' Problems in Getting Services from Hospital F

Problem	Number	Percent
Expensive fees	13	37.1
Not enough beds	8	22.9
Slow service	6	17.1
Overcrowded	3	8.6

When asked about the quality of their colleagues, most staff gave a positive grade (good and excellent) to specialist doctors (97.1 percent), followed by general doctors (86.1 percent) (see Table 6.50). One or two staff viewed some staff categories as bad: professional nurses (2.8 percent), technicians (5.6 percent) and supporting staff (2.8 percent). However, the vast majority ranked their personnel in the good and, to a lesser extent, fair categories.

Table 6.50 Perceptions of Staff on the Quality of Staff in Hospital F

Type of staff	Excellent	Good	Fair	Bad	Very bad
Administrator	1 (2.8)	26 (72.2)	9 (25)	-	-
General doctor	-	31 (86.1)	5 (13.9)	-	-
Specialist doctor	4 (11.1)	29 (80.6)	3 (8.3)	-	-
Professional nurse	1 (2.8)	21 (58.3)	13 (36.1)	1 (2.8)	-
Practical nurse	2 (5.6)	21 (58.3)	13 (36.1)	-	-
Technician	-	26 (72.2)	8 (22.2)	2 (5.6)	-
Supporting staff	-	20 (55.6)	15 (41.7)	1 (2.8)	-

There were 29 staff who responded to the question of which areas should Hospital F improve. Approximately half of Hospital F's staff (44.8 percent) made the general observation that the hospital should improve its services to ensure client satisfaction (see Table 6.51). Some staff thought that Hospital F should improve welfare for staff (20.7

percent). Seventeen percent of staff mentioned that both the administration system and the number of staff, particularly specialist doctors, should be improved. About 13 percent thought Hospital F should expand the hospital building whereas 10.3 percent of the staff desired improvement of staff morale. One or two staff identified other problems which needed addressing: providing more modern equipment (6.9 percent), information system (3.4 percent), limited budget of the hospital (3.4 percent), academic knowledge of staff (6.9 percent), staff salary (3.4 percent) and performance appraisal (3.4 percent).

Table 6.51 Perceptions of Staff on Problems in Hospital F

Problems	Number	Percent
Service	13	44.8
Staff welfare	6	20.7
Number of staff	5	17.2
Administration system	5	17.2
Expansion of the hospital	4	13.8
Staff morale	3	10.3
Academic knowledge	2	6.9
Modern equipment	2	6.9
Staff salaries	1	3.4
Information system	1	3.4
Performance appraisal	1	3.4
Hospital budget	1	3.4

Staff of Hospital F seldom had chances for human resources development. The number of training courses per person outside the hospital ranked from one to five with the median of two (SD = 1.410). Study visits of staff ranged from one to three per person with the median of one (SD = 0.793). In 1997, a group of Hospital F staff visited a hospital in Singapore to look at surgical techniques and general hospital service and management.

Patient Perceptions

There were 47 patients interviewed in Hospital F. They were almost equally distributed between out-patients and in-patients. Females accounted for 63.8 percent of the patients interviewed. Their ages ranged from 13 to 74 years with an average age of 36.3 years (SD = 13.64). Most of these patients were from the province where the hospital was located (84.6 percent). In terms of highest educational level achieved, 44.7 percent had finished primary education, 17.0 percent finished secondary education (up to grade 9), 19.1 percent had high school or equivalent, and 19.1 percent had bachelor degrees (see Table 6.52).

Table 6.52 Educational Levels of Patients Responding to Questionnaires in Hospital F

Educational level	Number	Percent
Primary	21	44.7
Secondary	8	17.0
High school	9	19.1
Bachelor degree	9	19.1
Postgraduate degrees	-	-

The largest occupational category of patients was merchant (27.7 percent), followed by farmer and worker (25.5 percent), student (17 percent) and company staff (14.9 percent) (see Table 6.53). The rest were housewife (10.6 percent), and one each of government official and state enterprise staff.

Table 6.53 Occupations of Patients in Hospital F

Occupation	Number	Percent
Farmer and worker	12	25.5
Merchant	13	27.7
Housewife	5	10.6
Student	8	17.0
Company staff	7	14.9
Government official	1	2.1
State enterprise staff	1	2.1

Patients' incomes ranged from 1,000 to 50,000 Baht per month with a median of 6,400 Baht (SD = 10611.04). Many of the patients (36.6 percent) had received services from Hospital F before. Patients' residences ranged from 2 to 120 kilometre from this hospital with a median of 40 kilometre (SD = 37.15). The hospital fees were from 200 to 45,000 Baht with a median of 1,450 Baht (SD=11,530.75). The length of stay ranged from one to ten days with a median of two days (SD = 2.40). Patients' expenses for transportation to and from the hospital were 6 Baht to 500 Baht. The median was 30 Baht (SD = 118.17). Other expenses such as food ranged from 60 to 500 Baht per visit with the median of 100 Baht (SD = 142.24).

Most of the patients or their relatives (76.5 percent) paid for their hospital fees (see Table 6.54). Third party payers included the Traffic Accident Insurance Scheme (14.5 percent), the civil servant insurance scheme (4.3 percent) and the Social Security Scheme (4.3 percent). Ten patients (21.3 percent) complained that they had financing problems in paying their bills.

Table 6.54 Sources of Patient Payment for Hospital F's Fees

Patient's fee paid by	Number	Percent
Patient or relatives	36	76.5
Traffic Accident Insurance Scheme	7	14.9
Civil Servant Insurance Scheme	2	4.3
Workman Scheme	2	4.3

The most common reasons why patients chose to get services from Hospital F were quick service (57.4 percent) and good service (53.3 percent) (see Table 6.55). Other reasons included good medical treatment (21.5 percent), live near the hospital (10.6 percent), cleanliness and relatives could stay with in-patients (8.5 percent each), and condition of their insurance (6.4 percent).

Table 6.55 Reasons the Patients Chose to Get Services from Hospital F

Reason	Number	Percent
Quick service	27	57.4
Good service	25	53.2
Good medical treatment	12	21.5
Live near the hospital	5	10.6
Relative could stay with in-patients	4	8.5
Cleanliness	4	8.5
Condition of the insurance	3	6.4
Good reputation	2	4.3
Staff's good manner	2	4.3

Almost all patients thought the adequacy of equipment in Hospital F was good to excellent (91.5 percent) (see Table 6.56). Only 8.5 percent thought it was fair. Similar to adequacy of equipment, 89.1 percent of the patients identified Hospital F as good to excellent for modern equipment.

Table 6.56 Perceptions of Patients on Equipment of Hospital F

Equipment	Excellent	Good	Fair	Bad	Very bad
Adequacy of equipment	11(23.4)	32(68.1)	4(8.4)	-	-
Modernity of equipment	10(21.7)	31(67.4)	5(10.9)	-	-

The opinions of patients on care given by doctors, nurses and other staff were mostly good to excellent. Almost all of the patients viewed physical examination by doctors (93.6 percent) and treatment by doctor (97.7 percent) as good to excellent (see Table 6.57). Most patients identified care by nurses (89.4 percent) and care by other staff (85.1 percent) as good to excellent. Only one patient (2.1 percent) identified nursing care and care by other staff as bad. However, none of the patients viewed care by staff as very bad

Table 6.57 Perceptions of Patients on the Quality of Care by Different Types of Health Personnel in Hospital F

Health personnel	Excellent	Good	Fair	Bad	Very bad
Physical examination by doctor	8 (17)	36(76.6)	3(6.4)	-	-
Treatment by doctor	7(14.9)	39(83.0)	1(2.1)	-	-
Nursing care	9(19.2)	33(70.2)	4(8.5)	1(2.1)	-
Care by other staff	5(10.6)	35(74.5)	6(12.8)	1(2.1)	-

Half of the patients (50.1 percent) identified the waiting time to see the doctor as quick to very quick but lower percentages of patients identified waiting time to pay fees (27.9 percent) and waiting time for medicine (42.5 percent) as quick to very quick (see Table 6.58). Most of the patients identified waiting time to pay fees (55.8 percent) and waiting time for medicine (52.5 percent) as average. About a quarter of patient thought waiting time to pay fees was slow. From observation, patients spent about an hour to four hours for a visit in this hospital.

Table 6.58 Perceptions of Patients on Waiting Time for Various Activities in Hospital F

Service	Very quick	Quick	Average	Slow	Very slow
Waiting to see doctor	7(14.9)	17(36.2)	19(40.4)	3(6.4)	1(2.1)
Waiting to pay fees	1(2.3)	11(25.6)	24(55.8)	7(16.3)	-
Waiting for medicine	2(5)	15(37.5)	21(52.5)	2(5)	-

Most patients viewed Hospital F's building (89.4 percent), outside the building (85.1 percent), and toilets (80.5 percent) as clean to very clean (see Table 6.59). Very few patients identified the hospital building (2.1 percent), outside the building (4.3 percent) and toilet (7.3 percent) as dirty. No respondent used the very dirty classification.

Table 6.59 Perceptions of Patients on the Cleanliness of Hospital F

Area	Very clean	Clean	Fair	Dirty	Very dirty
In the building	10 (21.3)	32 (68.1)	4 (8.5)	1(2.1)	-
Outside the building	5(10.6)	35 (74.5)	5(10.6)	2(4.3)	-
Toilet	2(4.9)	31 (75.6)	5(12.2)	3(7.3)	-

For the patients who had experience in getting medicine from Hospital F, 69.2 percent thought the continuity of getting drugs was good and 15.4 judged it as excellent (see Table 6.60). It was similar regarding the regularity of the doctors' visits. Most (75.7 percent) of the patients thought that the doctors' visits was good while 16.2 percent deemed it excellent. Only one patient (2.6 percent) identified the continuity of getting medicine from Hospital F as bad.

Table 6.60 Perceptions of Patients on the Continuity of Care from Hospital F

Type of continuity care	Excellent	Good	Fair	Bad	Very bad
Continuity in getting medicine	6(15.4)	27(69.2)	5(12.8)	1(2.6)	-
Regularity of doctors' visits	6(16.2)	28(75.7)	3(8.1)	-	-
Doctors' efforts to solve patient's problems	10(21.3)	36(76.6)	1(2.1)	-	-

Most Patients said they had enough information and good understanding on their illness (82.6 percent), how to take care of themselves (71.7 percent) and treatment (76.1 percent) (see Table 6.61). However, only about half the patients received explanation and good understanding about laboratory results (57.2 percent). A significant minority of patients believed there was no explanation concerning laboratory results (21.4 percent), illnesses (6.5 percent), how to take care of themselves (17.4 percent) and treatment (13 percent). The rest of the patients received explanation but did not understand the information about laboratory results (21.4 percent), illness (10.9 percent), how to take care of themselves (10.9 percent) and treatment (10.9 percent).

Table 6.61 Perceptions of Patients on the Information Acquired from Hospital F

Information	No explanation	Explain but seldom understood	Explain and well understood
Laboratory results	6(21.4)	6(21.4)	16(57.2)
Illness	3(6.5)	5(10.9)	38(82.6)
How to take care of themselves	8(17.4)	5(10.9)	33(71.7)
Treatment	6(13.0)	5(10.9)	35(76.1)

The patients were generally impressed with the services in Hospital F. The majority of patients identified the quality of the various categories of services of this hospital as good or excellent (see Table 6.62). More than 75 percent of patients thought that all categories of services of Hospital F were good. When asked about the overall service quality, 60.9 percent of the patients identified it as good and 23.9 percent of them thought it was excellent. These figures for over-all service quality clearly demonstrated patients' satisfaction with the services of Hospital F. None of the patients thought the quality of service in this hospital was bad or very bad. Some of the patients (3.0 to 16.7 percent) rated the quality of service as fair.

Table 6.62 Perceptions of Patients on the Quality of Service of Hospital F

Service	Excellent	Good	Fair	Bad	Very bad
Staff Collaboration	1(2.1)	40(85.1)	6(12.8)	-	-
Emergency	5(13.5)	28(75.7)	4(10.8)	-	-
Prevention of complication	3(8.3)	27(75.0)	6(16.7)	-	-
Staff manner	5(10.6)	38(80.9)	4(8.5)	-	-
Reception for relatives	4(8.7)	36(78.3)	6(3.0)	-	-
Overall service quality	11(23.9)	28(60.9)	7(15.2)	-	-

Well over half the patients (63.8 percent) identified that they had a high to the highest level of participation in decision-making on their present and future treatment (63.8 percent). For examination and operation the figure was 69 percent (see Table 6.63). However, there were some patients who thought they had low and very low levels of participation in decision-making on treatment (19.2 percent) and on examination and operation (9.6 percent).

Table 6.63 Perceptions of Patients on Participation in Decision-making on Their Health .

Level of participation	Very high	High	Average	Low	Very low
In present and future treatment	5 (10.6)	25 (53.2)	8 (17.0)	3 (6.4)	6 (12.8)
In examination and operation	4 (9.5)	25 (59.5)	9 (21.4)	1 (2.4)	3 (7.2)

Nineteen patients responded to the question of what they wanted Hospital F to improve. The most popular choices of patients suggested Hospital F should provide faster service (31.6 percent), charge cheaper fees (26.3 percent), reduce overcrowding of the hospital (15.8 percent) and improve cleanliness of the hospital building (15.8 percent) (see Table 6.64). Two patients thought the hospital should provide more doctors and nurses (10.5 percent), while one person indicated improved environment (5.3 percent), better patients' rooms (5.3 percent) and more time for patients to meet doctors (5.3 percent).

Table 6.64 Suggested Improvement to Hospital F Identified by Patients

Areas which need improvement	Number	Percent
Slow service	6	31.6
Expensive fees	5	26.3
Cleanliness of toilet	4	21.1
Cleanliness of hospital buildings	3	15.8
Overcrowding of the hospital	3	15.8
Inadequate numbers of doctors and nurses	2	10.5
Time for patients to meet doctors	1	5.3
Condition of patients' rooms	1	5.3
Hospital environment	1	5.3

Most of the patients said they would seek services again in Hospital F (78.2 percent) whereas 14.9 percent were not sure whether they would come back (see Table 6.65).

Three patients (6.4 percent) said they would not come back. The most common reasons to get services in this hospital again were good services (31.1 percent), continuity of treatment (26.7 percent), good treatment and equipment (11.1 percent), followed by quick service (6.7 percent), cheap fees (2.2 percent) and condition of patient's insurance (2.2 percent). The reason which two patients identified for not coming back for service was expensive fees. Another patient said it was because he lived far from the hospital. Patients who were not sure whether they would come back for service gave the reason that they would wait for the result of their current treatment before giving a clear yes/no answer.

Table 6.65 Reasons Identified by Patients to Return for Services to Hospital F

Reason to return for service	Number	Percent
Good service	14	31.1
Continuity of treatment	12	26.7
Good treatment and equipment	5	11.1
Quick service	3	6.7
Cheap fee	2	4.4
Condition of patient's insurance	2	4.4

Conclusion: Hospital F

Hospital F is a not-for-profit private hospital. It had faced fierce market competition with other private hospitals in its province during Thailand's economic boom. Hospital F had to use financial incentives to hold their staff from being poached by other private hospitals. The hospital also used quality improvement initiatives and accreditation to attract customers. Hospital F had survived the economic crisis, and continued its plan to open its new five-storey building in January 1999. The strengths of Hospital F were that it had a variety of specialist doctors who could provide any service patients needed, cheaper fees compared to other private hospital, and quicker service when compared with public hospitals. In 1997, Hospital F had decided to use ISO 9002 to improve and accredit its quality. The hospital has implemented a formal quality improvement

programme with the involvement of staff at all levels. The hospital expected to get its ISO 9002 licence by the end of 1998. Staff were generally satisfied with working conditions at Hospital F. Doctors identified that they had freedom in their professional practice including charging low fees or no fees for some patients such as poor persons. Such practice made the fees of Hospital F lower than other private hospitals. Patients generally perceived that Hospital F provided them good and reasonably quick services. They could request some help from the charity fund of the hospital if necessary. Most of the patients said they would come for treatment again, mostly because of Hospital F's good service and treatment.

Chapter Seven

Comparing Public and Private Hospitals in the Northeast of Thailand

Introduction

Having presented the detailed case studies of measures and perceptions of hospital performance in chapters 5 and 6, It is now time to turn to comparative matters. The underlying question in this chapter is whether there were systematic differences between public and private hospitals in the Northeast of Thailand. Of particular concern are the views of patients and staff on the institutions' performances. Are private market-driven hospitals seen to be offering better services than public hospitals? Can we also determine if private hospitals are more efficient than public ones?

In addition to the six case studies of public and private hospitals presented in chapters 5 and 6, data from two more hospitals are included in this analysis. One of these hospitals was public, the other was private. Data were collected from these hospitals for patient and staff perceptions only. Details of administration were not gathered. In total there were four public hospitals surveyed. Two were community hospitals (a 10-beds hospital and a 30-beds hospital), one was a provincial hospital (400 beds) and not included in chapter 5, while the other was a regional hospital (638 beds). The four private hospitals included a 50-beds hospital, two 100-beds hospitals and a 250-beds hospital. Three of the private hospitals were private-for-profit, one was a private-not-for-profit hospital. One of the two private-for-profit 100-beds hospitals was not included in chapter 6. Table 7.1 sets out the details of all hospitals included in the analysis in this chapter.

Table 7.1 Types of Hospital and Bed Capacity

Hospital	Type	Bed Capacity
Public Hospital		
Hospital A	Community hospital	10
Hospital B	Community hospital	30
Hospital C	Regional hospital	613
Hospital G*	Provincial hospital	400
Private Hospital		
Hospital D	Private for Profit	50
Hospital E	Private for Profit	100
Hospital F	Private not for profit	250
Hospital H*	Private for profit	100

Note: * is a hospital from which data were collected from patients and staff only. Details of administration were not gathered.

General Information on Patients and Staff of Public and Private Hospitals

A total of 228 patients responded to questionnaires. One hundred patients were from four public hospitals and 128 were from four private hospitals (see Table 7.2). From the four public hospitals, the largest number of respondents was from Hospital C (45 percent) followed by Hospital G (30 percent), Hospital B (15 percent) and Hospital A (10 percent). The patients in private hospitals were distributed as follows: from Hospital F (36.8 percent), Hospital E (25.8 percent), Hospital G (25.8 percent) and Hospital D (11.7 percent).

Table 7.2 Number and Percentage of Patients Interviewed in Each Public and Private Hospital

Public Hospital			Private Hospital		
	Number	Percent		Number	Percent
Hospital A	10	10	Hospital D	15	11.7
Hospital B	15	15	Hospital E	33	25.8
Hospital C	45	45	Hospital F	47	36.8
Hospital G	30	30	Hospital H	33	25.8
Total	100	100	Total	128	100

Just over half the patients interviewed from both public (54 percent) and private (55.5 percent) hospitals were from the out-patient departments. The public sector profile was similar to that for patients from private hospitals in term of sex and age. A slight majority of the patients interviewed in public hospitals were female (57 percent), their ages ranging from 15 to 82 years with an average age of 41.9 years (see Table 7.3). Similarly, the patients interviewed in private hospitals were female (59.4 percent). Their ages ranged from 13 to 80 years, with the average of 42.3 years. However, patients from private hospitals were different from those from public hospitals in education and occupation. Patients in private hospitals had relatively higher educational levels than those in public hospitals. In public hospitals, the highest educational level for most of the patients (70 percent) was finished primary education, whereas only 44.5 percent of those in private hospitals had finished primary education as their highest level achieved. Twenty four percent of patients in the private hospitals had bachelor degrees and above. The figure for public hospital patients was only 5 percent. There were more middle class occupations among patients receiving services from private hospitals than from public hospitals. Patients in private hospitals included merchants/business (25.7 percent), civil servants (9.4 percent), state enterprise workers (3.9 percent) and office staff (10.2 percent). The most represented occupational group among public hospital patients was farmer or worker (58 percent). These persons had relatively lower incomes than the typically middle class patients in private hospitals.

**Table 7.3 Patients from Public and Private Hospitals According to Sex,
Education and Occupation**

Information	Public		Private	
	Number	Percent	Number	Percent
Department				
Out-patient	54	54	71	55.5
In-patient	46	46	57	44.5
Sex				
Female	57	57	76	59.4
Male	43	43	52	40.6
Education				
Primary	70	70	57	44.5
Secondary	18	18	21	16.4
Certificate	7	7	19	14.9
Bachelor	5	5	28	21.9
Post graduate	-	-	3	2.3
Occupation				
None/ housewife	14	14	15	11.7
Student	8	8	12	9.4
Farmer/worker	58	58	38	29.7
Merchant/ business	6	7	33	25.7
Civil servant	7	8	12	9.4
State enterprise	-	-	5	3.9
Office staff	4	4	13	10.2
Other	1	1	-	-

Comparing Patients' Perceptions

In comparing patients' perceptions of the relative merits of public and private hospitals, the first question concerned the reasons for the choice of a public or private institution. The survey data revealed that the most important factors which made patients decide to get services from private hospitals were good services (44.9 percent), quick services (40.9 percent), followed by good treatment (17.3 percent) and good care by doctors (12.6 percent) (see Table 7.4). The reasons given by patient for seeking services from public hospitals were that they lived near that hospital (54 percent), using health cards (17 percent), good services (13 percent) and cheap fees (10 percent). None of the patients perceived the public hospital as providing quick services. The above information indicated that patients seeking health services from public hospitals had limited options, their choice being determined by convenience and affordability. In fact, they could even be considered as having a lack of options. However, those patients in private hospitals could make their choices based on quality of services and efficiency criteria such as convenience. They had access to the financial resources which permitted choice in the decision of where to obtain hospital services.

Table 7.4 Leading Factors Which Made Patients Decide Whether to Get Services from Private or Public Hospitals

Leading factors	Private hospital		Public hospital	
	number	percent	number	percent
Good services	57	44.9	13	13
Quick services	52	40.9	-	-
Good treatment	22	17.3	8	8
Good care by doctor	16	12.6	6	6
Live near the hospital	15	11.8	54	54
Cheap fees	7	5.5	10	10
Health card or insurance	6	4.7	17	17

The next issue concerns the perceptions of patients about the overall quality of the services they actually received (see Table 7.5). A five-point scale was used to gather these ratings: excellent, good, fair, bad and very bad. The excellent rating was almost entirely confined to private hospitals. Almost 20 percent of ratings were at this grade for private hospitals as compared to only 1 percent (1 patient) in the public hospitals. However, a greater proportion of public than private patients classified the quality of services as good, 80 percent compared to 63.3 percent. Thus, when the two positive categories of 'excellent' and 'good' are combined we find remarkably similar figures. For private hospital patients, 82.1 percent used these categories while the figure for public hospitals was 81 percent. When we consider the less favourable judgments of service quality, no 'bad' marks were found in the private sector but there were 3 percent of public sector's patients using this grade. The proportions who thought services 'fair' are similar between public and private (16 percent and 17.9 percent). Once again, if the two categories of 'bad' and 'fair' are combined, a remarkably similar picture emerges for both public and private sectors. The categories account for 19 percent of responses in the public sector and 17.9 percent in the private sector. Thus, while the private sector certainly elicited far more 'excellent' grades and no 'bad' grades we can put forward an argument that positive versus negative and mildly negative assessments are very similar between public and private sectors. To complicate matters we can consider the question of whether there are lower expectations of public sector health service provision. Unfortunately, the data do not reveal the answer to this question but it seems a reasonable assumption that those making individual decisions to pay the higher prices of private health care would have assumptions about the superiority of these services. The quality of health care in the private hospitals would have to live up to these assumptions.

Table 7.5 Perceptions of Patients on the Quality of Services in Four Public and Four Private Hospitals

Hospital	Excellent Number (Percent)	Good Number (Percent)	Fair Number (Percent)	Bad Number (Percent)	Very bad Number (Percent)
Public	1 (1)	80 (80)	16 (16)	3 (3)	- -
Private	24 (18.8)	81 (63.3)	23 (17.9)	-	-

General Information on Staff in Public and Private Hospitals

There were 267 staff from eight hospitals who responded to questionnaires, 153 staff from public hospitals and 114 from private hospitals (see Table 7.6). The biggest representation of public hospital staff was from Hospital C (51.6 percent), followed by Hospital G (27.5 percent), Hospital B (14.4 percent) and Hospital A (6.5 percent). Responding staff of private hospitals were composed of 31.6 percent each from Hospitals E and F, 22.8 percent from Hospital G and 14.0 percent from Hospital D.

Table 7.6 Number and Percentage of Staff Responding to Questionnaires in Public and Private Hospitals

Public Hospital			Private Hospital		
	Number	Percent		Number	Percent
Hospital A	10	6.5	Hospital D	16	14.0
Hospital B	22	14.4	Hospital E	36	31.6
Hospital C	79	51.6	Hospital F	36	31.6
Hospital G	42	27.5	Hospital H	26	22.8
Total	153	100	Total	114	100

To gather information on staff perceptions of hospital performance, staff were divided into a variety of occupational categories, such as doctor, several types of nurse, and support staff. The majority of staff employed in the hospitals were nurses and support staff. Thus, the greatest proportion of staff responses to questionnaires was from the different ranks of nurses, 54.2 percent in public hospitals and 60.6 percent in private hospitals. Professional nurse was both the major nurse category and the source of the largest number of respondents in both the public (35.7 percent) and private (32.5 percent) hospitals (see Table 7.7). In public hospitals there were no practical nurses but there were technical nurses (18.5 percent of respondents), and nurse aides (10.5 percent of respondents). In private hospitals 28.1 percent of respondents were practical nurses and 14.9 percent were nurse aides. There were no practical nurses in public hospital samples since all of them had finished the training to qualify as technical nurses or professional nurses. Practical nurses had only 1-year training compared to 2 years for technical nurses or 4 years for professional nurses. Nurse aides were hospital staff who were recruited by the hospitals and had basic care training for 3 months to help provide nursing care under the supervision of professional nurses in the hospitals.

There were similar proportions of staff in the education groups with bachelor degrees and postgraduate qualification. In public hospitals the figure was 60 percent and in private hospitals it was 59.7 percent. However, there were 3 times the proportion of staff who had only finished high school or lower (21.1 percent) in private hospitals than in public hospitals (7.8 percent). The staff with finished only high school or lower were mostly nurse aides and supporting staff who had lower salaries. There were more staff who had graduated more than 10 years previously in public hospitals (49.7 percent), than in private hospitals (23.7 percent). This gave a lower age profile to the staff of private hospitals.

Table 7.7 Basic Profiles of Staff from Public and Private Hospitals

Information	Public		Private	
	Number	Percent	Number	Percent
Position				
Doetor	14	9.2	14	12.3
Professional nurse	55	35.7	37	32.5
Technical nurse	28	18.3	-	-
Practical nurse	-	-	32	28.1
Nurse Aide	16	10.5	17	14.9
Physiotherapist, technician	14	9.2	7	6.1
Public health staff	6	3.9	-	-
Dentist and pharmacist	10	6.5	3	2.7
Supporting staff	8	5.2	4	3.5
Sex				
Female	30	19.6	21	18.4
Male	123	80.4	93	81.6
Education				
High school or lower	12	7.8	24	21.0
Certificate	49	32.0	22	19.3
Bachelor	72	47.8	58	51.8
Postgraduate	19	12.4	9	7.9
Years after graduation				
Less than 6 years	46	30.1	41	36.0
6 – 10 years	31	20.3	46	41.4
11 – 20 years	52	34.0	23	20.2
More than 20 years	24	15.7	4	3.5

Comparing Staff Perceptions

The first question in comparing staff perceptions is what staff thought were the reasons for the patients' choices of public or private hospitals. In considering this question we can assume a superior technical medical knowledge among staff. As such they are likely

to base their perceptions on different foundations than patients. The data (see Table 7.8) revealed that the reasons which private hospital staff thought influenced patients to seek services from their hospitals were good services (89.7 percent), quick services (89.5 percent), adequate and modern equipment (86 percent), and good quality of hospital staff (82.5 percent). This data showed that most of staff in private hospitals believed that their hospitals' quality of care, high technology equipment and efficiency in term of quick services were factors attracting clients. It was different in public hospitals. In the opinion of public hospital staff one of the major reasons why patients chose services from their hospitals was cheap fees (80.4 percent). To public hospital staff this demonstrated that many of their patients had limited choice for health care and were drawn to public hospitals by cheap fees. However, most of staff in public hospitals still thought patients trusted in their staff quality (71.7 percent), and good services (68.9 percent). Even so, the proportions of staff nominating good quality and good service were lower than the proportion of staff in private hospitals who identified the same categories for their hospitals. Only 35.5 percent of public hospital staff thought quick service was a reason for selecting public hospital service. It was much lower than the 89.5 percent of staff in private institutions who indentified this reason for explaining patient choice of their hospitals. It indicated that private hospitals were better in term of efficiency of services in staffs' perceptions.

Table 7.8 Perceptions of Staff on Leading Factors Which Influenced Patients to Seek Services from Private and Public Hospitals

Leading factors	Private hospital		Public hospital	
	Number	Percent	Number	Percent
Good services	102	89.7	104	68.9
Quick services	102	89.5	54	35.5
Adequacy of equipment and modern technology	98	86	91	60.3
Good quality of staff	94	82.5	110	71.9
Cheap fees	43	37.7	123	80.4

Staff in private hospitals viewed the quality of their colleagues over the range from excellent to very bad. For the excellent grade, the highest proportion of private hospital staff gave it to specialist doctors (14.0 percent) (see Table 7.9). The highest proportion of staff in public hospital awarding the excellent grade also gave it to specialist doctors but the figure was only 7.0 percent. More private hospital staff gave positive grades (excellent and good) to their colleagues than did staff in public hospitals. For example, 75.9 percent of private hospital staff rated their general doctors positively compared with 55.5 percent in the public sector. More negative grades (bad and very bad) were used by public hospital staff to describe their colleagues' performance, such as 4.3 percent of nurses in public hospitals with the bad grade compared with 1.8 percent of nurses in private hospitals.

These figures possibly reflect the way private hospitals recruited doctors and other professional staff. Many private hospitals usually contracted well-qualified doctors from public hospitals both for full-time and part-time positions. This meant that private hospitals were able to recruit doctors with the best profile and reputations from the public sector. Similar trends of qualification were found in supporting staff such as nurses and technicians.

In general, all staff of private hospitals handled lower numbers of patients than their public sector counterparts, and they received better pay. However, public hospital staff had greater job security and better fringe benefits e.g. health care for their family. The promotion system in public hospitals was not based on performance appraisal unlike that in private hospitals. Staff in the public sector usually received one step of salary increase annually. When given 1.5 steps up to 2 steps it was considered as promotion. This promotion was supposed to be based on performance but it was actually based on seniority or patronage. By contrast, in private hospitals, the promotion was strictly based on performance. Different individual staff had different rates and amounts of salary increase. In private hospitals public sector salary standardisation was not evident.

Table 7.9 Perceptions of Staff on the Quality of Staff in Public and Private Hospitals

Hospital	Excellent Number (Percent)	Good Number (Percent)	Fair Number (Percent)	Bad Number (Percent)	Very bad Number (Percent)
Public Hospitals					
Administrator	6(3.9)	81(52.9)	53(34.6)	10(6.5)	2(1.3)
General doctor	4(2.6)	81(52.9)	10(39.3)	8(5.2)	-
Specialist doctor	10(7.0)	95(66.9)	33(23.2)	4(2.8)	-
Nurse	9(5.9)	74(52.5)	58(41.1)	6(4.3)	-
Practical nurse	-	-	-	-	-
Technician	3(2.0)	83(54.6)	63(41.4)	3(2.0)	-
Supporting staff	1(0.7)	68(45.9)	68(45.9)	11(7.4)	-
Hospital	Excellent Number (Percent)	Good Number (Percent)	Fair Number (Percent)	Bad Number (Percent)	Very bad Number (Percent)
Private hospitals					
Administrator	8(7)	70(61.4)	30(26.3)	6(5.3)	-
General doctor	6(5.4)	76(70.5)	24(21.4)	3(2.7)	-
Specialist doctor	16(14.0)	76(66.7)	18(15.8)	4(3.5)	-
Nurse	7(6.1)	74(64.9)	31(27.2)	2(1.8)	-
Practical nurse	4(3.5)	67(58.8)	40(35.1)	3(2.6)	-
Technician	2(1.8)	71(62.8)	37(32.7)	3(2.7)	-
Supporting staff	1(0.9)	60(52.6)	46(40.4)	6(5.3)	1(0.9)

In terms of resource allocation, respondents indicated that private hospitals were superior. Staff in private hospitals believed staff numbers across different categories were adequate whereas public hospital staff demonstrated less satisfaction with the numbers in public hospitals. About 80 percent of staff in public hospitals believed that their hospitals did not have adequate numbers of specialist doctors and nurses (see Table 7.10). Administrators were the only type of staff which public hospital staff thought were

employed in adequate numbers (74.5 percent). This differential perception on the adequacy of numbers of personnel derives from the need for allocation of staff in public hospitals to comply with the Civil Servant Code. Individual public hospitals did not have the authority to appoint, transfer or dismiss permanent staff. The Ministry of Public Health decided staff numbers for public hospitals based on beds-capacity and not by demand. Doctors, dentists and pharmacists were individually assigned randomly by ballot to public hospitals nationwide. Nurses had to pass examinations organised by each provincial health office and then were assigned by the director of the provincial health office to each hospital in the province. This had led to dysfunctions in staffing patterns resulting in public hospitals often having inadequate numbers of staff to service clients. By contrast staff numbers and distribution between different specialisations were based on demand in private hospitals. Most staff in private hospitals thought their hospitals had enough administrators, supporting staff, practical nurses, technicians and general doctors. About 50 percent of hospital staff in private hospitals thought their hospitals had just enough specialist doctors and nurses while only about 20 percent of staff in public hospitals considered their hospitals had enough specialist doctors, other staff and nurses. This was because private hospitals were autonomous organization which could plan, recruit, transfer and determine retirement based on need. Public hospitals had to conform to the standardised bureaucratic requirements of the central government ministry.

Table 7.10 Perceptions of Hospital Staff on the Adequacy of Staff in Private and Public Hospitals

Types of staff	Adequacy of staff	
	Private hospitals (Percent)	Public hospitals (Percent)
Administrator	93.5	74.5
General doctor	74.6	32.7
Specialist doctor	53.1	19.7
Nurse	54.4	20.9
Practical nurse	78.1	41.1
Technician	75.0	31.4
Supporting staff	85.0	45.0
Others	60.0	20.0

The salaries of staff in private hospitals ranged from 2,500 - 90,000 Baht per month with a median of 11,625 Baht and standard deviation of 16,229.8, while salaries of staff in public hospitals ranged from 3,500-41,000 Baht per month with the median of 11,160 Baht and standard deviation of 6,048.3, only 465 Baht lower (see Table 7.11). The private hospitals hired more staff in the lowest salary group (23.6 percent in the <5000 baht category), while only 7.2 percent of staff in public hospitals were in this range. Staff in the lowest salary group are nurse aides, supporting staff and practical nurses. About 85 percent of staff in public hospitals were in the middle salary group (5,000- 20,000 Baht) compared to only 57.5 percent in private hospitals. These staff were mostly nurses, technicians and physiotherapists. Private hospitals hired more personnel in the three highest salary groups (>20,000 Baht) (18.9 percent) than public hospitals which had only 7.9 percent in this group. These high income groups were doctors, dentists, pharmacists and head nurses. The figures showed that the highest salary of staff in private hospitals was 90,000 Baht per month, while it was only 41,000 Baht in public hospitals. This reflected different salary policies between private and public hospitals. Private hospitals allocated their resources according to their priorities. Since reputation of doctors was one of the most important factors influencing patients to come for services in their hospitals, these personnel were attracted by higher salaries than would be available in the public sector. Information from in-depth interviews confirmed that some doctors in private hospitals actually received 100,000 Baht per month while doctors in public hospitals with similar qualification and working experience were paid about 20,000-25,000 Baht per month. These salaries were on a scale determined by the Civil Service Code and applied nationwide. Salaries in the public hospitals were much more compressed than in the private hospitals. Over 84 percent of personnel in public hospitals were in the two middle categories while the private sector figure was only 57.5 percent. This serves to emphasise the bureaucratic determination of public sector salaries and the market-driven nature of the private sector.

Table 7.11 Salaries of Hospital Staff in Private and Public Hospitals

Salary (Baht)	Private Hospital		Public Hospital	
	Number	Percent	Number	Percent
<5,000	25	23.6	11	7.2
5,000-10,000	24	22.6	52	34.2
10,001-20,000	37	34.9	77	50.7
20,001-30,000	9	8.5	10	6.6
30,001-50,000	5	4.7	2	1.3
> 50,001	6	5.7	-	-
Minimum salary (Baht)	2,500		3,500	
Maximum salary (Baht)	90,000		41,000	
Median	11,625		11,160	
Standard deviation	16,229.8		6,048.3	

Regarding equity issues, patients in private hospitals had higher incomes than those in public hospitals. The income of patients in public hospitals ranged from 500-20,000 Baht per month with the median of 3,000 Baht and standard deviation of 10,622.9 while incomes of the patients in private hospitals ranged from 1,000-50,000 Baht per month with the median of 7,000 Baht and standard deviation of 4,146.7 (see Table 7.12). In public hospitals, 73.2 percent of patients earned not more than 5,000 Baht per month while only 37.1 percent of clients in private hospital declared incomes of not more than 5,000 Baht a month. More than 35 percent of patients in private hospitals earned more than 10,000 Baht a month while there were only 10.7 percent of those from public hospitals in this income bracket. This information combined with the data on why patients selected hospital, leads to the simple conclusion that higher income groups sought services from private hospitals which they perceived to be of better quality and which they could afford. Charges for services are higher in private hospitals than in public ones thus limiting access for low income earners. However, competition between hospitals reduces the likelihood of excessive charges. Lower income groups may also perceive private hospitals to be superior but they obtained more services in public

hospitals since they lacked money or appropriate health scheme to facilitate choice. However, there were 37.1 percent of clients of private hospitals from the lowest income group. The figure owes much to the inclusion of a not-for-profit private hospital in this study. The fees in this hospital were known to be cheaper than other private hospitals.

Table 7.12 Monthly Incomes of Patients in Private and Public Hospitals

Monthly Income (Baht)	Private Hospitals		Public Hospitals	
	Number	Percent	Number	Percent
≤5,000	33	37.1	41	73.2
5,001- 10,000	24	27.0	9	16.1
10,001- 20,000	20	22.5	6	10.7
20,001- 30,000	7	7.9	-	-
30,001-50,000	5	5.6	-	-
Minimum salary (Baht)	1,000		500	
Maximum salary (Baht)	50,000		20,000	
Median	7,000		3,000	
Standard deviation	4,146.7		10,622.9	

An interesting comparison was who paid for health care. This study found that less than 20 percent of patients in public hospitals paid for health services by themselves, while more than 80 percent were paid by third parties (see Table 7.13). These third party payers included Ministry of Public Health insurance or health cards (34 percent of patients), medical care for elderly (12 percent), medical care for children 0-12 years (10 percent) and medical service for civil servants and state enterprise employees (8 percent). There was a compulsion to use public hospitals for all of these schemes except for the civil servant and state enterprise scheme. Choice was not available to these patients. Only 20 percent of patients in public hospitals paid for health care from their own pocket. The possibility arises that they might not have selected public hospitals if they had the opportunity to choose. They had to seek health service from the public sector largely according to accessibility and affordability. Leading factors which made patients decide

to get services from public hospitals were living near the hospital (54 percent), condition of health card (17 percent), and cheap fees (10 percent) (see Table 7.4).

In the private hospitals about 74 percent of patients paid their own bills and/or got financial support from their relatives while only 26.9 percent of patients had their charges paid by third parties. It was explicit that patients in private hospitals made their own choice for health care. Health insurance schemes institutionalised differential access. The third party which paid for health services in private hospitals were different from those in public hospitals. The third party in private hospitals were from the fund of the Traffic Vehicle Liability Act Scheme (10.9 percent), Civil Servants Medical Benefits scheme (7.8 percent) and from Social Security and Workers' Compensation Scheme (7 percent) (see Table 7.13). These data implied that patients with least choice in health care were those whose health insurance was the social support scheme. This study showed that there were more patients from the Social Security Fund, Worker Compensation Fund and Traffic Vehicle Act obtaining health services in private hospitals. In this study, the proportion of civil servants using private hospitals was low (7.8 percent of total patients surveyed). It was the result of the new policy of the government to restrict the reimbursement for private hospital services for civil servants and family members after the economic crisis. Under this policy the government would not pay for their health services in private hospitals except in emergencies.

Table 7.13 Payers of Patients' Hospital Fees in Private and Public Hospitals

Fees' Payers	Private Hospitals		Public Hospitals	
	Number	Percent	Number	Percent
Patient	56	43.8	14	14
Relatives	38	29.7	16	16
Civil servant and state enterprise	10	7.8	8	8
Social security fund, worker compensation fund	9	7.0	1	1
Community leader, volunteer	-	-	3	3
Health card	-	-	34	34
Children 1-12 years	-	-	10	10
Elderly	-	-	12	12
Buddhist monk and novices	1	0.8	-	-
Traffic Vehicle Liability Act	14	10.9	2	2
Total	128	100	100	100

The growth of private hospitals had contributed to competition in health markets both within the private sector and with the public sector. If possible, patients selected health services from the hospitals which they believed would provide them with good services, and quick services. Many may have had severely circumscribed choice e.g. by income, by third party scheme. Like their private competitors, public hospitals also collected fees from patients to operate their hospitals. The public hospitals had autonomy to manage this fee income unlike their government-provided budget which was under the centralised regulation of the ministry. Thus, both public and private hospitals had financial incentives a) to improve efficiency and hence reduce costs, and b) to enhance reputation to attract more patients.

These imperatives led both public and private sector hospitals to consider and even introduce management improvement programmes. These quality improvement initiatives

included organisational development (OD), Total Quality Management (TQM), Hospital Accreditation (HA). There was also Hah Sor, a simple quality improvement method which emphasised cleanliness, convenience, ordering of the workplace and self-discipline of staff. Organisational development enhanced team work and staff participation in organisation tasks. Hospital accreditation was a new kind of quality improvement method for public hospitals introduced by the Ministry of Public Health. Hospital accreditation had three steps: quality improvement, self-auditing, and external auditing and accreditation by an external body. Total quality management (TQM) was similar to hospital accreditation except TQM did not have self-auditing, and external auditing and accreditation steps.

It was the public hospitals which were implementing these types of quality improvement programmes. Such initiatives were absent from all but one private hospital. This may be due to the internalisation of quality and efficiency in the operation of private hospitals. Considerations of performance efficiency and effectiveness were constant concerns and two private hospitals planned to adopt ISO 9002. The decision to get ISO 9002 qualifications resulted from both a desire to improve quality and the marketing potential of such accreditation. Hospital F, the private not-for-profit institution used ISO 9002 to improve its quality and planned to have external audit certification in late 1999 (see Table 7.14). Any hospital using ISO 9002 to improve its quality must have the strong commitment of administrators and staff since it uses a lot of money for training and external auditing. Hospital F had spent more than 500,000 Baht for this quality improvement process. Both administrators and staff were satisfied with the results.

Public hospitals in this study used quality improvement methods introduced by Ministry of Public Health. Hospital B, a 30-beds public hospital used Hah Sor. Hospital C, the regional hospital, had used Har Sor in 1993 and started implementing OD in 1995 and TQM in 1996. In 1997, Hospital C volunteered to join a pilot project for hospital accreditation. Hospital accreditation also needed strong commitment from administrators and participation of staff across the hospital since it involved training, and external auditing and certification at the time of writing. Hospital C was still working hard on this quality improvement method. The problems this hospital encountered were resistance and poor participation by some administrators and staff. Hospital A was a new 10-beds

public hospitals and still had to finalise its operational system. Thus, it had not started to implementing any quality improvement method. Considerations which were integral to these quality methodologies were evident in the establishment of Hospital A.

Table 7.14 Type of Quality Management Employed

Hospital	Quality Improvement Measured
Public Hospital	
Hospital A	None
Hospital B	Hah Sor
Hospital C	Hah Sor, OD, TQM, HA
Private Hospital	
Hospital D	None
Hospital E	Planned to use ISO 9002
Hospital F	ISO 9002

Management of Public and Private Hospitals

All public hospitals provided health services according to their mandates from the Ministry of Public Health. Public hospitals targeted all population groups and engaged in special programs for the less privileged such as the elderly and children ages 0 to 12 years old. These persons received free services. The policies of these public hospitals were set by the Ministry of Public Health. Directors of the hospitals were appointed by the Division of Regional Hospitals at the Ministry of Public Health. Public hospital management teams were composed of hospital directors, deputy directors and heads of most departments. This made for big management teams (10 to 42 members). This generated problems such as slow decision-making and lack of ownership of some issues. Private hospitals, on the other hand were mostly administered by the owners or professional administrators hired by the owners or share-holders. (see Table 7.15). A number of differences can be identified between the management systems of public and

private hospitals. These can be discussed in terms of policy, leadership and accountability, personnel management, quality assurance and information technology.

Policy: All public hospitals had to follow the same government policies which covered a wide range of types of care e.g. health promotion, disease prevention, curative and rehabilitation. The activities in which a public hospital was involved were determined by central government according to formulae that were standardised and applied nationwide. On the other hand, private hospitals made their policies on the basis of commercial interests and viability. Clients were the central concern, and services were provided to serve clients' demands. Thus, they concentrated on curative activities which would generate more custom and hence revenue. The private sector move to provide more health promotion services such as antenatal care and physical check-ups was also a response to the increasing demand for such services from a market able to pay for them.

Leadership and Accountability: Public hospitals were led by large management teams which comprised the centrally appointed director, deputy directors and heads of sections who had been appointed to the position by the hospital director. They often served for a long time. It seems possible that such management teams valued loyalty to the director very highly. It is not clear where this left performance in the list of public hospital priorities. Large management boards in big hospitals such as Hospital C resulted in slow decision-making. Furthermore, the board's management performance would have little or no adverse effects on members' positions if they failed to deliver. Performance accountability was not a major concern in public hospitals. In contrast, if the private hospital management did not produce the required results, they would certainly be replaced by the owner or other remedial action would be taken immediately. Indicators for good performance of private hospitals are profit, client satisfaction and reputation in society. The incentives for private hospital staff for good performance are financial bonuses and extension of their contract terms.

Financial Management: Public hospitals had very rigid financial management systems with specified amounts allocated to line-item budgets. Public hospitals could not reallocate their government budgets to fit changing demands for services such as to hire more employees for a particular activity. They had to hire only for positions they had proposed last year, with salary scales that conformed with civil service regulations. For

example, if the public hospitals needed IT personnel, it was very hard to get the qualified personnel to suit their needs since the salary they could offer was much lower than the market level. If they really needed extra personnel for urgent tasks they had to use their own income for this, but they still had to follow the civil service salary scale. In contrast, private hospitals budgeted to suit their commercial interests. This gave them more flexibility in term of recruitment, termination, transfer, or even decreasing salaries to suit their financial situations. Hospital drug supplies could be reduced to only a month or 2 weeks for some items to facilitate the cash flow of the hospital. The general constraint was that financial flexibility in private hospitals facilitated quick responses to rapidly changing environments whereas public hospitals could only move slowly as they were restricted by central government regulations and processes.

Personnel management: All personnel management for government departments had to be under the Civil Service Commission regulations. Doctors and the other professional groups in the public sector received salaries based on their qualifications. Salary increases were also determined by these rules. In theory there was a range of incremental advances based on performance : half a step, one step, one and a half steps and two steps. In practice, promotion in the public sector was mostly by patronage and seniority. Experience elsewhere was not taken into account when applying for a position in the public sector. For example if a doctor had been working in a public hospital in Bangkok for 7 years and then resigned to work at the university hospital of Khon Kaen, his experience in Bangkok would not count. He would have to start again. This rigid salary structure posed serious problems of brain drain, especially during the economic boom period when specialised doctors could earn at least three times higher salaries if they worked for private hospitals. Pharmacists, and dentists in private hospitals usually got salaries at least two times higher than those in public hospitals whereas registered nurses get one and a half to two times higher salaries than in the public sector based on their experience and special qualifications for work in such areas as operation rooms or intensive care units. Private hospitals had their own salary scales. They paid more to get highly qualified staff, especially those who could attract patients to come to get their services. In general, this meant paying high salaries for well-known doctors. But private hospitals also relied on low-paid nurses especially practical nurses and nurse aides and supporting staff. Furthermore, private hospitals could easily dismiss or reduce payments to their staff. However, public hospitals had better human resource

development than private hospitals. Each year public hospitals sent more staff to attend various seminars, and training courses. This was partly due to the private hospital policy of recruitment which aimed to get the most suitable candidate for the job. Most private hospitals had no policies for staff development through further training especially for low-ranking personnel. It might even be argued that prior public sector training of private sector doctors and other specialized medical personnel represented a government subsidy to the private sector.

Quality assurance: At the time of the study government had introduced a policy of using Hospital Accreditation (HA) to improve the standards of public hospitals. In the pilot implementation at various public hospitals across the country, it was found that the bigger the hospital the harder it was to achieve HA. All quality improvement measures needed participation of staff at all levels. However, it proved difficult to get participation from all staff in public hospitals. Public hospitals such as Hospital C used voluntary processes of staff or departmental participation in HA. Only a few departments opted to join the accreditation process and even they struggled to maintain support among staff and administrators. Some staff lacked the incentive to participate as they perceived HA as having potentially adverse effects on their promotion or job security. Staff usually got one step salary increases annually if they did not commit any obvious wrong. Staff could even get one and a half or two steps promotion not so much from their performance against clear indicators but according to their superior's judgement only. Such embedded bureaucratic practice tended to work against the enthusiastic reception of quality management initiatives when they were introduced into public hospitals.

In contrast, many private hospitals in Thailand chose ISO 9002 as their quality assurance technique as well as a potent advertising tool. Hospital F, the not-for-profit private hospital, decided to get ISO 9002 certification. The hospital managed to get staff at all levels to participate and reported considerable progress in quality improvement. Pressure on staff to participate is more easily exerted in private sector hospitals where management processes and practices are determined internally and not by central government. Hospital F paid private ISO consultants to help them get ISO 9002 in the shortest feasible time. Then they advertised as an ISO 9002 certified hospital for marketing purposes. Both public and private hospitals have been working hard for quality improvement and assurance. However, private hospitals seem to be more

successful whether or not formal schemes such as ISO 9002 were employed. In large part this derived from the managerial autonomy in private hospitals where staff enjoyed less job security and administrators had authority to dismiss staff or reduce salaries.

Information technology: Although both public and private hospital used computers, they were employed for different purposes. All public hospitals in this study were partly computerised. Computers were used mainly for patient registration, drug prescription and some financial records to report to the Ministry of Public Health. The extent of computer utilisation also relied on the availability of staff who had computer skills. Public hospitals usually did not have staff specialised in computer operations. They used other staff who were interested in computers. These staff might be self-taught or were supported for further training in information technology to fit the need of their hospitals. The rigidity of staff position set by the Ministry of Public Health meant that public hospitals could not hire IT staff as required. This hindered the information system development in public hospitals. On the other hand, two out of four private hospitals in this study were fully computerised. They had computers on line for patient registration, patients' bills, drug prescriptions and, importantly, for financial management. Hospitals hired staff who were trained and capable to handle this information technology. The other two private hospitals were partly computerised similar to the public hospitals. The two fully computerised hospitals were newly established, and explicitly used high technology to enhance their efficiency and reputation. These hospitals could retrieve a wide range of information such as their patients' records, drugs, and account balance from their fully computerised systems.

Table 7.15 Comparison of Selected Management Features of Public and Private Hospitals

Management feature	Public hospital	Private hospital
Policy	<ul style="list-style-type: none"> - Set by the Ministry of Public Health - Responsibility for provision of services to all population groups especially the less privileged 	<ul style="list-style-type: none"> - Set by hospital's board - Aimed for cost recovery, and profit
Leadership and accountability	<ul style="list-style-type: none"> - Leader was appointed at the central level - Had no hospital board, but had large management team, and many operating units. - Established functional units or committee such as taking staff from different units to form a special group to perform some tanks while they still worked in their units. This sometimes resulted in dual authority, coordination problem. - Management focus on compliance with rules and regulations rather than results 	<ul style="list-style-type: none"> - Leader or manager was selected by share holders or the owner of the hospital - Had three levels of management (board, management team and operating units). - Board and management accountable for debts - Hospital outcomes the focus of board and manager's accountability
Financial management	<ul style="list-style-type: none"> - Line-item budgeting - Need to raise supplementary revenue 	<ul style="list-style-type: none"> -Business modle of financial management -Oriented to profit or payment of capital and recurrent through fees

Management feature	Public hospital	Private hospital
Personnel management	<ul style="list-style-type: none"> - Recruitment according to civil service rules - Pay scales determined by Civil Service Commission - Promotion and advance by seniority and patronage - Rigid staff allocation 	<ul style="list-style-type: none"> - Recruitment policy set by hospital management - Pay scales according to market and productivity - Flexible staff allocation
Service	<ul style="list-style-type: none"> -Required to provide fullest possible range of services -Covered curative, preventive, promotional, rehabilitative services - Determined by government policy - Extension functions were training and education of health personnel and health research -Encouraged by government often resisted by staff 	<ul style="list-style-type: none"> -Able to choose which services to provide - Mostly curative - Client oriented - Move to preventive and promotional services according to market demand
Quality assurance	<ul style="list-style-type: none"> - Hospital accreditation, organisational development, total quality management 	<ul style="list-style-type: none"> - ISO 9002 use especially for marketing - Hospital accreditation
Information system & technology	<ul style="list-style-type: none"> - Partly computerised - Emphasis patient registry, report to the MoPH - Difficult to recruit specialist IT staff 	<ul style="list-style-type: none"> - Partly and fully computerised - Information used for financial management, patients' bills, drugs -IT personnel hired if needed

Conclusion

The private hospitals in the Northeast were considered by patients as giving better quality of service when compared to public hospitals. A larger proportion of staff in private hospitals perceived better quality in their hospitals as compared to staff in public hospitals. These private hospitals were also more efficient in terms of resource allocation. This was better aligned with securing desired health care outputs. However, it must be appreciated that private hospitals could choose the activities in which they wished to be involved. The public sector hospitals had much broader responsibilities which were fixed by the central government. Such different principles for operation create difficulties for comparing efficiency between public and private hospitals. However, survival in the private sector required closer attention to efficiency than was needed in the public sector where specified levels of funding were guaranteed. But, public sector hospitals were aware of efficiency and quality matter and had taken steps to improve their service quality. They encountered greater staff resistance to such reforms than in the private sector where the balance of power was strongly weighted towards owner and top managers.

The rapid growth of private hospitals could be classified as the 'patient-led' experience where 'money follows patients'. These patients sought the better services which private hospitals claimed to provide. The higher income people sought services from private hospitals more than the lower income people. The former could afford to pay, the latter most often could not. Thus, there was inequity in access to health services. However, the private hospitals themselves were not fully to blame for the inequity. The differentiated health insurance system of the country also contributed as some health insurance schemes directed members to specified public hospitals rather than allowing them choice of where to seek treatment. The private hospitals were the first to suffer from the 1997 economic crisis through the government policy of not allowing civil servants and family members to get private hospital services. Ironically, the economic crisis may have encouraged even greater efficiency among private sector hospitals as heightened competition for fewer patients may have driven costs downward. This efficiency had to be obtained while maintaining or enhancing quality, as quality defined reputation, and it was reputation which attracted paying patients.

Chapter Eight

Summary and Concluding Notes

This study is based on the hypothesis that private health providers are an efficient and effective addition to Thailand's health system especially in the Northeastern region. They are necessary to maintain the required levels of service and they do not adversely affect access to health services. Private hospitals merely provide increased levels of service and competition to make the overall health system more efficient and effective. The introduction of private health care does not create a two-tier system of public and private health care. The situation of public and private health care provision in the Northeast of Thailand was described and analysed in order to respond to this hypothesis.

At the start, the thesis investigated changes in health problems, health policies and health care delivery in developing countries and Thailand, that have led to the development and growth of private health care. The study revealed that in 1882, the fifth year of the reign of King Rama III, Western medicine was introduced to Thailand and subsequently began to play an important role in the country's medical and public health system. It was employed to provide curative care to patients and also contributed to disease prevention strategies. Health care in Thailand has been mainly funded and operated by the government since the introduction of Western medicine. The government has directly provided health care, owned most hospitals, and managed the health services through the bureaucratic structures and processes of the Ministry of Public Health. Health care policy has been developed since 1961 in the form of the Health Development Plan (HDP) as an integral part of the National Economic and Social Development Plan (NESDP). These efforts have helped improve all people's health status. They have become better educated about health matters, enjoyed improved nutrition, been subject to effective immunisation and have been given access to health care when sick. These factors have resulted in people living longer. Life expectancy at birth in 1964 was 55.9 years for males and 62.0

years for females while by 2000 it had risen to 69.4 years for males and 74.1 years for females. Despite the considerable increase in the coverage of health services and improved ratios of health personnel to total population, the Thai people now face some health problems that are different from those encountered in the past. Some of the new challenges are the epidemiological transition from communicable diseases to behaviour related diseases; the changing population age structure has resulted in the existing health service systems being unable to respond effectively to the needs of certain groups of citizens such as the elderly; the requirement for people to pay for health services when about 30 percent of the population did not have any health insurance thus leading to inaccessibility of services; rising costs of medical care especially from the usage of high technology; government expenditure on health growing at a faster rate than the gross national product in times of budgetary constraint; and inadequate information for self-care and sound selection of services. Furthermore, public expectations of health services are rising as those who use services demand higher standards of care. Changes in the socio-economic environment, democratisation, rapid development of medical and information technologies, and alterations to the overall managerial system for national health development have also had a considerable impact on the structure and performance of current health systems.

Urbanisation in Thailand is linked to economic growth, most of which has occurred in urban areas. This is where wealth and high incomes are located and where new market opportunities have been concentrated. Health has been one of those market opportunities. The private health sector has experienced considerable growth in terms of numbers of private hospital beds, patients and staff during the past 20 years. When private hospitals first started registering with the Ministry of Public Health in 1962, there were four private hospitals. All of them were located and owned by not-for-profit organisations. The number of private hospitals in the country had grown to 364 in 1995. Most of this growth has been private for-profit facilities.

In addition to examining the development of health care and health issues across the whole country, this thesis also focuses on the Northeast of Thailand. This region covers an area of approximately one third of the country and accounts for one third of its

population, about 20 million people. It is the region which has the lowest average income per person and the highest level of personal debt in the country. The Northeast's health system problems are similar to those found elsewhere in the country, but may be more severe since it has the lowest level of health care coverage and lowest rate of health personnel per 1,000 population among Thailand's regions. In health service issues it conforms with the nation's patterns of change in demographics, health needs and expansion of the private sector. There were no private hospitals in the Northeast before 1957. In 1990 there were 28 private hospitals with 1,070 beds in the Northeast. The size of these hospitals was small with no private hospital having more than 100 beds. The expansion continued in the 1990s so that by 1997 there were 70 private hospitals with 5,268 beds an increase of almost 400 percent within 7 years. There were many private hospitals which had more than 100-beds capacity.

Five principal reasons for the growth in private sector health provision can be identified: growth of personal or household income leading to increased purchasing power; a popular perception of unchanging standards of care in urban public hospitals while demands grew for higher quality service from more affluent sections of the public; the creation of instruments to encourage private sector growth by the central ministries such as exemption from import duty on medical equipment and exemption of private hospitals from corporate income tax for the first 5 years; and the increasing role of third party payers. One final factor explaining the massive-growth of private health care has been the lack of a strong policy within the Ministry of Public Health to control private sector expansion

There has been much debate concerning the right public and private health mix and the costs and benefit of private health care in Thailand and the Northeast. Are patients more satisfied with private hospitals than public? This study found that patients perceived that private hospitals certainly elicited far more excellent grades (18.8 percent) and no bad grades whereas only one percent of patients in public sector viewed their services as excellent and 3 percent as bad. However when responses were aggregated as either positive (excellent and good) or negative (bad and very bad), assessments are very similar between public and private sectors. Lower expectations of patients toward the

public sector's health service provision may contribute to these gradings. Unfortunately, the data did not reveal the answer to this question but it seems a reasonable assumption that those making individual decision to pay the higher prices of private health care would expect better services than they believe are provided in the public sector. On the matter of quality it was found that patients selected health services in private hospitals based on their perceived better quality and quick service whereas patients obtained services in public hospitals mostly because they lived nearby or had limitation on their health insurance schemes.

Another debate concerns whether private hospitals were better staffed than public hospitals both in terms of numbers and quality of staff. The allocation of staff in private hospitals in the study was perceived to be much better both in term of quantity and quality. Most of staff in private hospitals identified that their hospitals had enough administrators, supporting staff, general doctors, practical nurses, technicians and general doctors. About 50 percent of hospital staff in private hospital thought their hospitals had just enough specialist doctors and nurses. When public hospital staff were asked about the adequacy of staff in their hospitals it was found that administrators was the only category which more than 50 percent of respondents considered as adequate. Quality of staff could also be reflected from staff perception on their colleagues' quality. More private hospital staff gave positive grades (excellent and good) to their colleagues than did staff in public hospitals. Similarly, more negative grades (bad and very bad) were given by public hospital staff to their colleagues than in private hospitals.

Are private hospitals better equipped? For the small public hospital such as 10-beds and 30-beds community hospitals, there were limited items of medical equipment whereas the 638-beds regional hospital had much modern equipment. There was no specialist doctor in 10-beds public hospital and only one specialist in the 30-beds hospital but he practiced as a general doctor due to the limitations of equipment. In contrast with private hospitals no matter whether they were 50-beds, 100-beds or 250-beds hospital, they were well equipped with modern technology and specialist doctors. It could be argued that it is because the community hospital mandate is to provide mostly primary care such as health promotion and diseases prevention. Curative services are not the exclusive priority so

that much modern technology equipment is not necessary. If a patient needs complicated treatment he/she will be referred to the higher level hospitals. However, the referral system seemed to affect the notion of equity in terms of accessibility to appropriate care when needed. Patients in the public system may have to spend more time and money travelling to other hospitals or experience delays in receiving proper treatment as they much roin the queues to see appropriate health personnel and take their turn with relevant equipment.

Do patients wait longer at public hospitals? Time patients spent for a service in private hospitals could be less than an hour whereas in public hospitals patients had to wait at least half a day or even more than one day. It should be noted that public hospitals had to serve more patients such as an average of 277 out-patients per day in the 30-beds community hospital and 1,335 out-patients per day in the regional hospital. Private hospitals served 150 to 200 out-patients in the 100 beds-hospitals and 391 out-patients per day in the 250-beds hospital. Public sector hospitals had community obligations not shared by the private hospitals. However, private sector practice seems to reflect more efficiency in term of flexibility of resources utilisation in response to demand. Public hospitals, sometimes failed to adjust to meet the need of their clients due to limitations imposed externally by government. Bureaucratic patterns of staff allocation and human resource management and a rigid centrally determined budgeting system were indicative of these external controls.

The study showed considerable contrasts in governance between the public and private sector. Public hospitals were elements of a centralised national health system. They were controlled by a central ministry which decided such things as staff allocation, remuneration and budgeting. Public hospitals were led by large management teams which resulted in slow decision-making. In addition, the performance of these teams did not affect their members' positions. Accountability was based on compliance rather than results. In contrast, private hospitals were mostly administered by the owners or professional administrators hired by the owners or share-holders. If the managers did not produce the required results, remedial actions would be taken. On the other hand if a

private hospital made a profit, generated client satisfaction and a good reputation, the managers would get bonuses and extensions of their contracts.

Thailand now has a mixed public-private system of health care. To use some services people choose private providers. But this is not a choice that all Thais have. As has been shown in the detailed study of Northeastern hospitals many patients used public sector because they had no alternative. Thus, private health care is only available to those who can afford it. This raises the question of whether a two-tier system of access to health care is arising in Thailand in which people with higher incomes can obtain superior services. There appears to be some truth in this. Private hospital patients were more likely to have middle class occupations and higher incomes than patients in the public hospitals. Private hospital patients enjoyed the financial situation which enabled them to choose their supplier of medical services. Many public sector patients went to those hospitals because they had to, not necessarily because they want to. Thus, economic situation was encouraging the emergence of a two-tier system of health provision in Thailand.

However, it should also be recognised that patients in public hospitals rated their treatment just as positively as those in private hospitals. The gaps between private and public provision appeared in such items as waiting times, equipment and overcrowding. It must also be appreciated that public hospitals have responsibilities for providing a comparative range of health services to the population whereas the majority of private hospitals are guided by the need to make money or at least cover operating costs from fees. Thus, private hospitals become involved in providing only those services which will attract paying patients. Private hospitals are now a firm fixture in the Thai health system and have set performance standards to which public hospitals can aspire but not necessarily afford. There are management lessons that the public sector can learn from the private sector the mission of public hospitals means that they can never be the same as private hospitals.

10. How do you know about this hospital?
1. Have got service here before 1. Yes 2. No A101 ()
2. From friends, relatives or colleagues 1. Yes. 2. No A102 ()
3. Advertisement 1. Yes 2. No A103 ()
4. From health personnel 1. Yes 2. No A104 ()
- Other (please specify) A105 ()
11. Travel and expense
- 11.1. Distance from your homekilometres. AI11 ()()
- 11.2. Is it convenient to come to this hospital?
1. Yes 2. No A112 ()
- 11.3. You paid a fee of.....Baht to this hospital A113()()()
- 11.4. Your health problems or symptom..... A114 ()
- 11.5. How long have you been admitted
in this hospital.....days? A115 ()
- 11.6. Travelling expenses to/ from the hospital.....Baht A116 ()()
- 11.7. Other expenses, such as foodBaht A117 ()()
12. Who paid for your hospital fees? A12 ()
1. Self or Relatives
2. Civil Servant Medical Benefits Scheme (CSMBS)
3. Social Security Scheme (SSS)
4. Low Income Card Scheme (LICS)
5. Voluntary Health Card Scheme (VHCS)
6. Children age 0-12 years old
7. Elderly (≥ 60 years old)
8. Traffic Liability Act Scheme (TLAS)
9. Other..(specify)
13. Do you have problems concerning hospital fees? A 131 ()
1. Yes 2. No
- If you have, how do you solve your problem? A 132 ()
14. What are factors which made you choose getting services
from this hospital? A 141 ()....
- A1415 ()
15. Do you know 'name' of your doctor? A15 ()
1. Yes.. (please specify) 2. No

Part Two: Patients' perceptions on hospital and its services

Please tell me your opinion concerning these issues?

Issue	Excellent	Good	Fair	Bad	Very bad
16. Medical equipment 16.1 Adequacy of equipment 16.2 Use of modern equipment					
17. Service by hospital staff 17.1 Physical examination 17.2 Treatment by doctors 17.3 Nursing care 17.4 Care by other staff					
18. Cleanliness of the Hospital 18.1 In the hospital building 18.2 In surrounding areas 18.3 Toilet					
19. Continuity of care 19.1 Continuity of getting drugs 19.2 Regularity of doctors' visits 19.3 Doctors' efforts to solve your problems					
20. Overall quality 20.1 Staff collaboration 20.2 Care in emergency situation 20.3 Preventing complication 20.4 Staff's manner 20.5 Reception for patients' relatives 20.6 Overall service quality					

21. Waiting time 21.1 Waiting to see doctors 21.2 Waiting to pay for service 20.3 Waiting to get drugs	Very quick	Quick	Average	Slow	Very slow
21. Level of participation in decision-making 21.1 Decisions about treatments 21.1 Decisions about operations	Very high	High	Average	Low	Very low
22. Information 22.1 Laboratory results 22.2 About operation 22.3 About your illnesses 22.4 About how to look after yourself 22.5 About treatment	No Explanation	Explain but do not understand	Explain and have good understanding		

24.1 What is your opinion concerning laboratory tests in this hospital? A24.1 ()

- () 1. Very appropriate () 2. Appropriate
() 3. Inadequate () 3. Very inadequate

What make you choose the above answer(please specify)..... A 24.2 ()

Part Three: Recommendations of patients concerning this hospital

25. What are your recommendations to improve this hospital? A 25 ()

.....
.....
.....

26. If you get sick will you come for service health service in this hospital again ? A 261()

- () 1. Yes () 2. No

Why..... A 262 () ()

Parts two: Staff's perceptions on hospital and its services

7. How long have you been working in this hospital?.....years B7 () ()
8. How much is your monthly salary.....Baht/ month B8 () () () () () ()
9. How much extra do you earn in this hospital?
-----Baht/ month B9 () () () () () ()
10. What unit are you working in at present? BI0 ()
- () 1. Out-patient and emergency unit () 2. In-patient unit
() 3. Intensive care unit/ Operation unit () 4. Drug unit
() 5. Dental unit () 6. Administration
() 7. Laboratory unit, X-ray unit, Rehabilitation unit
11. How many hours in a week are you working?.....hours/week B11 () ()
12. Had you have an orientation or training when you started working B12 ()
here? () 1. Yes () 2. No
If you had, what were the type or issues of training?
13. What do you think your hospital expects from you?
(You could select more than one choice.)
1. Good service for the patient () 1. Yes () 1.No B131 ()
2. Do your best for the hospitals' sake () 1. Yes () 2. No B132 ()
3. To make the community satisfied with the hospital B133 ()
() 1. Yes () 2. No
4. Other(please specify)..... B 134 ()
14. What do you like about working in this hospital?
(You can select more than one item.)
1. Serve the community () 1. Yes () 1.No B141 ()
2. Good salary () 1. Yes () 1.No B142 ()
3. Social status () 1. Yes () 1.No B143 ()
4. Freedom in practicing your profession () 1. Yes () 1.No B144 ()
5. Good opportunity for your future () 1. Yes () 1.No B145 ()
6. Other....(please specify)..... B146 ()

15. What factors do you think attracting patients to this hospital?

(You can select more than one item.)

- | | | | |
|---------------------------------|---------------------------------|-------------------------------|----------|
| 1. Good service | <input type="checkbox"/> 1. Yes | <input type="checkbox"/> 1.No | B151 () |
| 2. Cheap fees | <input type="checkbox"/> 1. Yes | <input type="checkbox"/> 1.No | B152 () |
| 3. Quick service | <input type="checkbox"/> 1. Yes | <input type="checkbox"/> 1.No | B153 () |
| 4. Good quality staff | <input type="checkbox"/> 1. Yes | <input type="checkbox"/> 1.No | B154 () |
| 5. Modern equipment | <input type="checkbox"/> 1. Yes | <input type="checkbox"/> 1.No | B155 () |
| 6. Other (please specify) | | | B156 () |

Part Three: Recommendations of staff concerning the hospital

Please give your opinion concerning these issues in your hospital.

16. How do you consider 'adequacy' of these types of staff in this hospital?

- | | | | |
|-------------------------------|--------------------------------------|--|-----------|
| 16.1 Administrator | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.1 () |
| 16.2 General doctor | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.2 () |
| 16.3 Specialist doctor | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.3 () |
| 16.4 Nurse | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.4 () |
| 16.5 Practical nurse | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.5 () |
| 16.7 Technician | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.6 () |
| 16.8 Supporting staff | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.7 () |
| 16.9 Other...(please specify) | <input type="checkbox"/> 1. Adequate | <input type="checkbox"/> 2. Inadequate | B16.8 () |

17. How do you consider quality of these types of staff in this hospital?

- | | | | | | | |
|------------------------|---------------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------------|----------|
| 17.1 Administrator | <input type="checkbox"/> 1. Excellent | <input type="checkbox"/> 2. Good | <input type="checkbox"/> 3. Fair | <input type="checkbox"/> 4. Bad | <input type="checkbox"/> 5. Very bad | B171 () |
| 17.2 General doctor | <input type="checkbox"/> 1. Excellent | <input type="checkbox"/> 2. Good | <input type="checkbox"/> 3. Fair | <input type="checkbox"/> 4. Bad | <input type="checkbox"/> 5. Very bad | B172 () |
| 17.3 Specialist doctor | <input type="checkbox"/> 1. Excellent | <input type="checkbox"/> 2. Good | <input type="checkbox"/> 3. Fair | <input type="checkbox"/> 4. Bad | <input type="checkbox"/> 5. Very bad. | B173 () |
| 17.4 Nurse | <input type="checkbox"/> 1. Excellent | <input type="checkbox"/> 2. Good | <input type="checkbox"/> 3. Fair | <input type="checkbox"/> 4. Bad | <input type="checkbox"/> 5. Very bad | B174 () |
| 17.5 Practical nurse | <input type="checkbox"/> 1. Excellent | <input type="checkbox"/> 2. Good | <input type="checkbox"/> 3. Fair | <input type="checkbox"/> 4. Bad | <input type="checkbox"/> 5. Very bad | B175 () |

- 17.6 Technician 1. Excellent 2. Good 3. Fair
 4. Bad 5. Very bad B176 ()
- 17.7 Supporting staff 1. Excellent 2. Good 3. Fair
 4. Bad 5. Very bad B177 ()
- 17.8 Other (please specify)
18. Which factors determine the reputation of this hospital?
- 18.1 Good service 1 Yes 2. No B181 ()
- 18.2 Modern equipment 1 Yes 2. No B182 ()
- 18.3 Cheap fees 1 Yes 2. No B183 ()
- 18.4 Specialist doctors 1 Yes 2. No B184 ()
- 18.5 Quick service 1 Yes 2. No B185 ()
- 18.6 Good environment 1 Yes 2. No B186 ()
- 18.7 Other..(please specify).....
19. What areas would you recommend this hospital to improve?
1.
2.
3.
20. What are your opinions concerning patients' problems in getting services in this hospital?
- 20.1 Not enough beds 1. Yes 2. No B201 ()
- 20.2 Overcrowding 1. Yes 2. No B202 ()
- 20.3 Expensive fees 1. Yes 2. No B203 ()
- 20.4 Slow service 1. Yes 2. No B204 ()
- 20.5 Other(please specify).....
21. Did you have any support in human resource development from this hospital? B21()
 1. Yes 2. No
- 22 If you had support, what kind of support did you participate in?
- 22.1 How many external training courses did you participate in?B221()
- 22.2 How many study tours did you participate in? B222()
- 22.3 How many internal seminars did you participate in? B223()
- 22.4 How many scholarship did you receive? B224 ()

Appendix 3
Information Requested from the Hospitals

1. Background information on your hospital
2. Management and administration of this hospital
 - 2.1 Organisation structure
 - 2.2 Policies, goals, plans
 - 2.3 Financial management
 - 2.4 Human resource management and human resource development
3. Statistics: services, patients' statistics
4. Quality improvement measures applied in the hospital

Appendix 4
Questions for In-depth Interviews

Director/ Administrator/ Health personnel

1. What are health problems of the people in this district?
2. How does your hospital respond to people's health problems?
3. What are the strengths of your hospital? Why do you think they are your hospital's strengths?
4. Does your hospital have any problems or weaknesses? If yes, what are they?
5. What measures do you think could help in solving those problems?
6. Does your hospital consider quality improvement as a priority, and why?
7. What does your hospital do or plan to do to improve the quality of its services?
8. Does your hospital have to compete with other public and private hospitals?
If yes, how does your hospital manage this situation?

Appendix 5
Questions for In-depth Interviews Academics

1. In your opinion, is it necessary to have private hospitals in Thailand and in the Northeast? What factors contributed to your answer?

2. What are the benefits of private hospitals for Thai society and what are the problems deriving from the growth of the private health sector in Thailand and the Northeast?

3. What measures do you recommend for producing the best public and private mix in the Thai health system?

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